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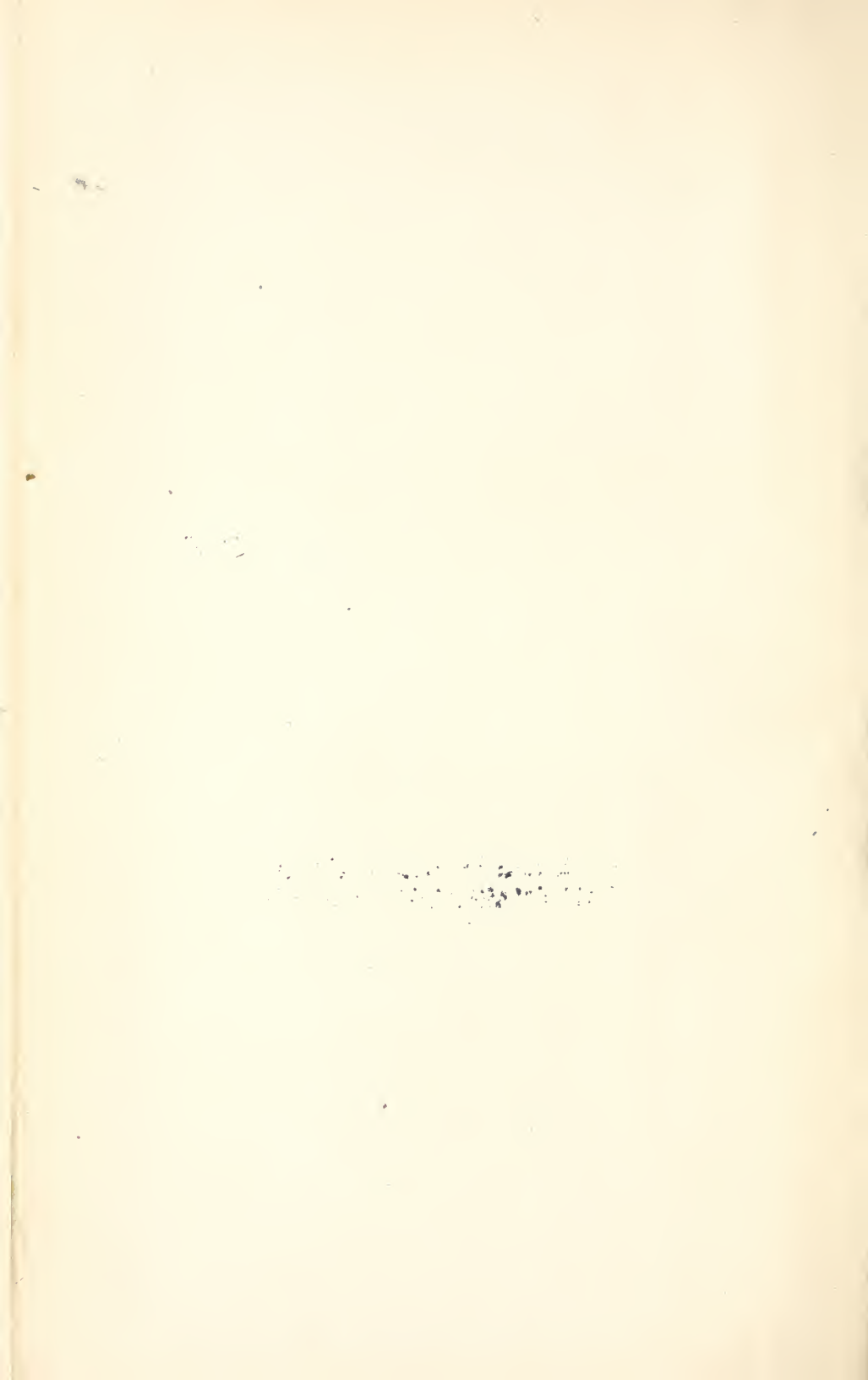
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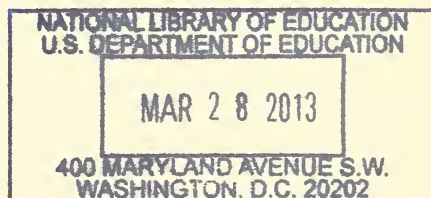


REPORT

OF THE

COMMISSIONER OF EDUCATION

FOR



THE YEAR 1890-'91.

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VOLUME 1.
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WASHINGTON:
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THE UNITED STATES
BUREAU OF EDUCATION.

Created as a Department March 2, 1867.

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COMMISSIONERS.

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March 14, 1867, to March 15, 1870.

JOHN EATON, PH. D., LL. D.,

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REPORT OF COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., January 1, 1893.

SIR: I have the honor to submit herewith my third annual report, the same being for the year ending June 30, 1891.

GENERAL STATISTICS.*

The total number of pupils in schools of all grades, public and private, at any time in the year is given (p. 40) at 14,669,069, the same being 23.09 per cent of the population, not quite one in four of all persons. In this number, however, the statistician has not included evening schools, nor art, industrial, business schools, nor schools for defective classes or for Indians, in all some 300,000 pupils, swelling the total to nearly 15,000,000 pupils.

Upon examination of the comparative statistics of enrollment in the common schools the increase over the previous year is shown to be 268,865. The increase over the previous year was for—

1890 over 1889.....	304, 936
1889 over 1888.....	209, 660
1888 over 1887.....	225, 180
1887 over 1886.....	220, 484
1886 over 1885.....	266, 436

A study of statistics shows progressing waves and returning eddies from year to year. When a long wave of industrial prosperity passes over the country the enrollment in the private schools shows a gain as compared with the public schools. Parents desire not so much a caste education as to gratify their peculiar notions as to course of study, hygienic conditions, quality of discipline, or hours of school attendance, and length of school term. The private school attracts by its special features in these respects. But when the wave of industrial prosperity subsides and a returning eddy sets in the private schools suffer most and the public schools gain relatively. It may be expected, therefore, that the increase of enrollment in the public schools will not be uniform.

* See Chapter I, pp. 1-44, prepared by Mr. F. E. Upton.

GRADE OF PUPILS.

Of these 15,000,000 pupils it appears that 96.4 per cent were receiving elementary instruction such as is given in primary and grammar schools in the first eight years of the school life of the child. Under secondary instruction there were 2.6 per cent and under higher instruction only 1 per cent. Secondary instruction technically includes the work from the ninth to the twelfth year of the course of study, and higher education all beyond that. According to this exhibit an average town in the United States with 1,000 pupils in school should have 964 in the elementary schools, 26 in the high school, 10 in the college or professional school.

LENGTH OF SCHOOL YEAR.

For the present year the number of days schools were kept averaged 135.7, the same being an increase of nearly a day and a half over the year previous. The comparative table shows the length of school year to have been for—

	Days.
1886.....	130.4
1887.....	131.3
1888.....	132.3
1889.....	133.7
1890.....	134.3
1891.....	135.7

This increase in length of session keeps pace with the growth of cities. Nearly all cities and large villages hold a session of from 180 to 200 days, while schools in rural districts continue in session from 70 to 150 days.

At the same time there has been a reaction in the thickly-settled communities of the Middle and Northeastern sections against the too long annual sessions which at first prevailed and in favor of longer vacations and shorter daily sessions. The necessity of preserving the child's elasticity is more clearly perceived. Too much strain on the growing child has the effect of arresting his development at a lower stadium of development. The city *gamin*, perhaps an orphan left to shift for himself at a tender age, has developed a precociously world-wise and cunning cast of intellect. But he has well-nigh stopped growing in the direction of science and art, literature, and humane culture. He is not so likely to help society as to burden it later on with his subsistence in a pauper asylum or a jail. It is beginning to be seen that society loses by shortening the period of childhood and youth, even for the sake of the school. The tasks of the school must not be so severe as to overcome the child's power of reaction, for this will prevent his continual development. Great perfection on a lower plane does not count against loss of capacity to reach a higher degree of development.

DAILY ATTENDANCE IN SCHOOL.

The item *enrollment in school* includes all pupils entered on the school registers during the year, no matter how short their period of attendance. The public schools keep a careful record from day to day of the number present and the number absent of those belonging to school. The total number of days' attendance of pupils the past year as reported to the Bureau of Education was 1,129,955,876 days, which being divided by 135.7, the average number of days the schools were kept, gives 8,329,234 as the number of pupils in school the entire average annual session. This also shows that the average number of days attended by the 13,000,000 enrolled in the public schools was only 87.

In my last report (1889-'90, p. XIV) I showed the average amount of schooling received by the entire population, based on the statistics of that year, to be 4.3 years of 200 days each. This is enough to take the pupil over a little more than one-half the course of study in the elementary school. Four States, Massachusetts, New York, Connecticut, and Ohio, give more than six years (of 200 days each) of schooling to each inhabitant, but the sections having fewest cities and most rural population are giving on an average only two and one-half years of actual schooling to the entire population. This shows that we are far from the danger of overeducating our people. It also gives additional interest to the statistics above quoted, showing the slowly increasing length of the annual session the schools are kept.

SCHOOL TEACHERS.

The total number of teachers in the public (or common) schools is reported at 368,791, one-third of these (33.1 per cent) being males. To this should be added the number in private schools—some 60,000 in all—to find the aggregate of teachers, which is nearly 425,000.

SCHOOL EXPENSES:

The total expenditure for public schools during the year is reported at \$146,800,163. This was \$17.67 for each pupil attending 135.7 days, and \$2.31 per capita of the whole population. Of the income for schools, nearly 70 per cent comes from local taxes, and 19 per cent from State taxes. If the expenditure for private schools is added, estimating it at \$28,000,000, the total expenditure for education aggregates \$175,000,000.

The amount expended on the common schools has risen from \$1.56 per capita of the whole population in 1879-80 to \$2.24 in 1889-90 and to \$2.31 in 1891. This indicates an attempt to secure a longer school term, increased attendance, better schoolhouses, and better-paid teachers. The amount expended per capita has risen in these eleven years 49 per cent; the attendance has increased from 19.7 to 20.3 per cent of

the population; the average monthly wages of male teachers has reached \$44.89, of female teachers, \$36.65. It is noticeable that the increase in expenditures per inhabitant for schools is greatest in the Southern States.

PRIVATE SCHOOLS.

The percentage of the whole enrollment attending private schools is 9.8 for elementary grades (first eight years of schooling); 39.8 for secondary pupils; and 69.7 for pupils under higher instruction; 11.2 per cent for all grades. In a former report I have taken the ground that the private school serves a very useful function, both in providing a field for experiment along new lines of educational methods and in providing a safeguard against a too niggardly policy in the management of the public schools. If good wages are not paid for good teachers they may withdraw and establish private schools. In this they serve a very useful function, and the proportion of children in such schools is not quite so large as it will become when the wealth of the average citizen becomes greater. But the number of secondary pupils in private schools is rapidly decreasing by reason of the establishment of high schools in cities and villages.

LAWS RELATING TO SCHOOL ATTENDANCE.

The specialist on State systems of schools has presented (pp. 35-37) an exhibit showing the laws relating to school attendance in the 28 States having compulsory laws. The prevailing feature in these laws is to require pupils from 8 to 14 years to attend school from 12 to 16 weeks each year, imposing a fine of not more than \$25 on parents or guardians for first offense, and a higher fine, and in rare cases imprisonment, for each subsequent offense; some States provide special truant officers; many provide reform schools for truants; employment is forbidden for young children during the hours of school sessions—2 States prescribing for children under 10 years; 4 under 12 years; 4 under 13 years; these and some other States prohibiting employment except when the prescribed schooling has been given.

EDUCATION IN NEW ZEALAND.

In Chapter II (pp. 45-94) I have presented a paper of Sir Robert Stout, K. C. M. G., formerly minister of education and premier of the colony, giving an admirable sketch of education in New Zealand, both of its free, compulsory, secular education and its private and parochial education. There is no more interesting chapter in the history of education than that which treats of education in the British colonies scattered round the world. The English feature of local self-government, in which is combined centralization for the control of what relates to the welfare of all, a local administration that sees to what concerns only the special province, appears under a variety of forms, differing in different colonies, and in all these colonies differing from

the system in the United States. There appear certain decided advantages in the manner in which centralization is combined with local control in the management of education in the British colonies.

EDUCATION IN FRANCE.

An attempt has been made by the specialist to give in half a dozen pages a brief statement of the system of education in France (Chapter III). The longer expositions printed in the previous reports gave fuller details but were less symmetrical. It is intended to report each year a brief statement, giving the outlines of the French system, in order that the items of current history may have their proper setting and be seen in their significance as regards the whole. An interesting sketch of the progress of elementary education since Guizot's law of 1833 is translated and summarized from the monograph on the population of France by the distinguished statistician, E. Levasseur. The continuation of the elementary schools in the direction taken by us in what is called the "English high school" is in France effected by "higher primary schools" (*écoles primaires supérieures*). A discussion follows of the general features of these schools, their increase (more than fifty, with an enrollment of 41,018 pupils, in 1891), their programme of studies, their finances. The regular classical schools (*Lycées*), corresponding to our preparatory schools, and such high schools as are modeled on the Boston Latin School, cover in their course of study half of the work of our elementary schools, all of the work of our public high schools, and as much of the work of our colleges as is included in the freshman and sophomore years. Foreign visitors (especially American visitors) who look in upon the work of the French *Lycées* are very much surprised at the amount of work successfully accomplished by the pupils. High authority estimates the average French boy of 16 at the *Lycée* to be two years in advance of the American boy of the same age in our preparatory school. This is one of the topics that challenges careful investigation, and it deserves to have a commission appointed to investigate it. In comparing the work of the different systems it needs not to be said that what is wanted is a rounded estimate of progress, including all aspects of growth. The effect of too much strain in any one direction will appear as arrested development, hindering advance in higher branches of study later on in the course. It is in this matter of arrest of development, produced by too much emphasis on memory studies or mechanical drill work in the elementary and secondary courses of study, that we have most to learn; in fact, the directors of education in all nations have most to learn in this field. International comparative statistics, commissions sent out to investigate the systems of other nations, are, therefore, of especial value just now. The present year of the Columbian Exposition* is noteworthy for the number of commissions appointed by European governments to report on the education

* 1893.

of the United States. A new epoch in school statistics is herewith inaugurated.

It will be noticed with interest (pp. 116-120) that the French are having the same difficulties that we encounter in readjusting the requirements of the degree of bachelor of arts in the presence of what are called modern studies, namely, science, history, modern literature, etc.

EDUCATION IN GREAT BRITAIN AND IRELAND.

After a brief view of the educational systems of England and Scotland, intended, like that given of France in Chapter III, to furnish an explanation of the current history for the year, there follows (Chapter V) a special study of the provision made for secondary and technical instruction in Great Britain, and in Chapter VI a sketch of education in Ireland. It is too early, as yet, to study the effect of the law of 1891 remitting fees of pupils in all schools aided by the Government grants and thus establishing, for the first time in the history of Great Britain, a free-school system. In my annual report for 1889-'90 (in the letter of transmittal) I have discussed, at some length, the peculiarities of English procedure in the matter of distributing financial aid. All existing institutions are assumed to have the first right for help, and accordingly they receive it, coupled, of course, with conditions such as Government inspection and standards of scholarship and attendance. With the passage of the law of 1891 all schools receiving the fee grant from the Government were required to remit tuition fees. At this point the private and endowed schools commenced to draw away from the common standard toward which Government inspection has been leading. Hereafter we may expect to see a rapid increase of free public schools ("board schools") and a corresponding decrease of private schools. These stood in the ratio of 62 per cent of pupils in private schools and 38 per cent in "board schools." It is likely that this ratio will be reversed. But even then Great Britain will have three times as large a percentage of enrollment in private schools as the United States (38 against 12), while it has, up to 1891, had five times the American quota in private schools.

In last year's report was presented a detailed account of education in Scotland, as the previous year of that in England. A sketch of the system of education in Ireland is given in the present report (pp. 151-164). It is a record of remarkable progress—from an enrollment of 18 in 1,000 of the population in 1835 to 176 in 1,000 in 1890. The annual expenditure for education in Ireland, as late as 1883, was estimated (in our money) at \$229,509, but in 1890 had risen to \$4,729,082, or almost exactly \$1 per capita for the population. The annual enrollment of pupils was over 1,000,000 for 1890, as the "average" enrollment is put at 828,520. In fact, it was 1,037,102, or 22 per cent of the population. An excellent system of supervision is in operation, and good salaries are paid to teachers. This, with a proportion of the population in school as large

as that in the United States or in Germany, ought to work great changes in the productive industry and social welfare of the people.

INDUSTRIAL AND TECHNICAL EDUCATION IN CENTRAL EUROPE.

In Chapter VII is given a sketch of the provisions for industrial education in Austria, Switzerland, and Germany. The "continuation school" of Germany is not like the "higher primary school" of France, an equivalent for our "English high school," but something that corresponds to the evening high school in Boston and some other cities of America. It is reported that Prussia has 1,131 of these continuation schools with 93,029 pupils; Bavaria 242, with 29,472 pupils; Saxony 28, with 7,912 pupils; Württemberg, 13,649 pupils, 71 out of every 100 apprentices attending such schools; Austria 323, with 65,041 pupils. These schools are held either in the evenings or on Sundays.

EDUCATION IN RUSSIA.

In Chapter VIII (pp. 195-262) is offered the first sketch of the system of education in Russia. The table of expenditure shows the sum of \$12,798,165 appropriated by the General Government. Besides this there were contributions from the Church and from local governments. The total enrollment of pupils is set at 2,472,627. Of these, 1,944,057 were boys and 527,520 girls.

With the growth of urban population in Russia schools increase and the enrollment of pupils gains on the population. Hitherto an enormous rural population, widely scattered in small village communities and using primitive methods of agriculture, has stood in the way of the extension of education to all the people. With city life comes division of labor, enhanced skill in the various industries, the employment of machinery, the increase of productive power on the part of the citizen, and the demand for schools for all the children of the people. After the Crimean war the Government, upon the initiative of the Czar, took the effective step towards encouraging urban civilization by importing skilled labor from western Europe. This has more than doubled, per capita, the wealth-producing power of the Russian people in the course of twenty-five years. While the farming populations, as a whole, do not produce annually on an average over 6 cents a day for each man, woman, and child, the city populations have increased the national production to 14 cents per day (for each inhabitant).

EDUCATION IN JAPAN.

The efforts of Japan to take up into itself the industrial and scientific achievements of European nations furnish one of the most remarkable phenomena of modern history. The results are even more astonishing. In 1890 a population of 41,000,000 people supported 7,730 Government schools with an attendance of 3,059,052 pupils. This movement dates from 1869, but it has, during the last twenty years, taken such root that it can no longer be regarded as a mere experiment.

EDUCATION IN ITALY.

A valuable contribution to the report on education in Italy is furnished by Professor Oldrini in Chapter x. It gives numerous details not accessible at the time the former statement was prepared for the annual report of 1888-'89 (see pp. 182-195 of that report). At the request of Professor Oldrini, Signor Luigi Bodio, the eminent Italian statistician, on a visit to this country, promised to furnish more recent data than those given in this chapter, when such data had been obtained. The promise was faithfully kept. Owing, however, to the fact that Prof. Oldrini's article was already in type and the plates cast before Signor Bodio returned to Italy, I have not been able to make such use of his article in this report as I wished. I have given in a note at the end of this letter (pp. xviii), an abstract of the data furnished, which may be read in connection with Chapter x. The entire article of Prof. Bodio will be given in the next annual report.

EDUCATION IN KOREA; THE SANDWICH ISLANDS.

Corea, like Japan, is a nation which originally borrowed its letters from China. The reaction against its traditional culture is not so great as that of Japan. It has, however, adopted a phonetic alphabet after the analogy of the Phœnician used by Europeans.

The former Commissioner of Education of this Bureau, Gen. John Eaton, has written a sketch of education in Hawaii. The number of pupils enrolled in the schools is 10,712 out of a population of 89,990. This good showing is due to the English-speaking part of the people, which is and has been largely a missionary influence. It is interesting to note that more than one-half of the pupils are of Hawaiian descent and that nearly one-third of the teachers are of the same race.

COMPARATIVE STATISTICS OF EDUCATION IN THE WORLD.

A table given on pp. 369-372 brings together in a convenient form for comparison the following items of education: (*a*) number of pupils below the grade of the university; (*b*) ratio of these to the entire population; (*c*) number in elementary schools; (*d*) number in secondary schools; (*e*) number in higher institutions; number in special schools; number of teachers; expenditures. For convenience of comparison the percentages are given in each case. These statistics are given for twenty-seven countries of Europe; ten countries of South America; four countries of Central America; four countries of North America; seven British colonies in Australasia; two in Africa; two in Asia.

LEGAL EDUCATION.

At the request of a committee of the American Bar Association an inquiry was undertaken by this Bureau into the condition of legal education in America, Europe, and other parts of the world. The results of this inquiry are contained in Chapters xiii to xvi (pp. 376 to 578).

The first part gives the statistics for the United States (Chap. XIII); the second part for Europe (Chap. XIV); the third part (Chap. XV) for Canada, Australia, Spanish America, Japan, and China; the fourth part gives the bibliography of the subject (Chap. XVI).

COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS.

A detailed description of the origin, history, and present condition of the colleges of agriculture and the mechanic arts is found in Chapter XVII of this report and in the tables on pp. 1442-1446. The paper was prepared by a professor connected with the Maryland College of Agriculture and the Mechanic Arts.

THE KINDERGARTENS OF EUROPE AND AMERICA.

In Chapter XIX is to be found an elaborate paper on the history and status of public kindergartens in several European countries. This paper and its appendixes of statistics should be considered in connection with the detailed tables on pp. 1156-1163, containing the results of a special inquiry sent out at the close of the year to all kindergartens that could be heard of. The report gives 2,000 kindergartens and upwards of 65,000 pupils in the United States. But there were 1,100 more known to exist, which did not reply to the circular of inquiry. It is safe to estimate the entire number of pupils in kindergartens at 100,000.

The usual statistical information is given in this report, and papers of interest on the higher education (XXII), professional instruction (XXIII), education in Alaska (XXV), class intervals in the public schools (XXVII). Besides there is a remarkable study of the history of education in southwest Virginia, by Rev. A. D. Mayo, and a report on the physical and mental condition of 50,000 children seen in 106 schools of London, by Dr. Francis Warner, an eminent English specialist.

In conclusion, I desire to take this opportunity to acknowledge the valuable services and willing cooperation of the corps of clerks in this office, and to recognize in particular the assistance given me by the chief clerk, Mr. J. W. Holcombe, and by the chiefs of division: Col. Weston Flint, of the division of statistics; Mrs. H. F. Hovey, of the division of correspondence; Mr. Henderson Presnell, of the library; Mr. F. E. Upton, head of the editing committee; Dr. L. R. Klemm, Misses A. T. Smith and Frances G. French, of the division of foreign exchange; and by Mr. Wellford Addis, specialist in professional schools, Mr. J. C. Boykin, specialist in city systems, and Dr. Arthur Macdonald, specialist in education as related to crime.

W. T. HARRIS,
Commissioner.

Hon. J. W. NOBLE,
Secretary of Interior.

EDUCATION IN ITALY.

[Supplementary to Chapter X.]

Signor Luigi Bodio, the distinguished director of the statistical bureau in Italy, has courteously furnished, at the request of Prof. Alex. Oldrini, information on Italian education additional to that by Prof. Oldrini given in Part I of this Report. In regard to the illiteracy in the Kingdom, he states the percentage per 100 inhabitants to be as follows:

Census.	All ages.	Of 6 years and above.	Of 20 years and above.
1861 (a).....	78.06	74.68	73.50
1871.....	72.96	68.77	68.64
1881.....	67.26	61.94	63.45

a Rome and Venice not included.

The decrease in illiteracy in Italy is also demonstrated by the increasing number of married men and women who sign the marriage contract, and by the reduced number of illiterates among the young recruits twenty years of age. The increased number of married men and women who sign the marriage contract is shown by the following figures, illiteracy being more noticeable in the southern provinces than in the central and northern provinces; more conspicuous in the rural districts and the smaller communes than in the larger towns.

Proportion of illiteracy in 1891 among those contracting marriage.

NORTHERN ITALY.

	Per cent.
Illiterate men and women at time of marriage:	
In all communes (*).....	28.39
In chief provincial communes only.....	17.84
In Turin.....	5.28
In Milan.....	6.40

CENTRAL ITALY.

Illiterate men and women at time of marriage:	
In all communes (*).....	55.46
In chief provincial communes only.....	28.93
In Florence.....	14.84
In Rome.....	18.24

SOUTHERN ITALY.

Illiterate men and women at time of marriage:	
In all communes (*).....	71.49
In chief provincial communes only.....	45.86
In Naples.....	36.08
In Catanzaro.....	71.49

Percentage of illiterates among young men twenty years of age recruited for the army.

Born—	
In 1851.....	52.78
In 1860.....	47.97
In 1870.....	41.10

A result of the organization of army schools, which are a feature of the Italian system of education, is that illiteracy among soldiers is greatly decreased. While the percentage of illiterates among those recruits who were born in 1870 was, as just stated, 41.10, that of soldiers sent home after their term of military service was only 21.95.

* Includes chief provincial communes.

INFANT SCHOOLS (ASILI INFANTILI) AND KINDERGARTENS.

The greater portion of the infant schools of Italy are established according to the plans of the Italian educator Ferrante Aporti (1791-1858), or according to the methods of Aporti and Froebel combined. In these schools children acquire the first rudiments of an elementary education. The Government gives annual subsidies towards establishing infant schools, or aids those already existing. Many are self-governing and have their own funds. There were 1,178 such in 1892. Still others are supported by charitable institutions, charitable associations, and private individuals.

Infant schools and kindergartens.	1872.	1883.	1892.
Public.....		1,379	1,706
Pupils.....		191,017	236,430
Private.....		362	642
Pupils.....		27,941	55,694
Total public and private.....	1,090	1,741	2,348
Pupils.....	130,806	218,958	292,124

There are in Italy at the present time few kindergartens conducted exclusively according to Froebel's methods. In 1892 they numbered 400.

POPULAR PRIMARY EDUCATION.

Primary instruction was first made compulsory in 1859 by a law which required the attendance at school of children between 6 and 12 years of age, and enjoined upon the communes the support of a number of boys and girls' schools proportionate to the number of pupils of age to attend such schools. This law could not be enforced on account of the difficulties attendant upon forming a constitution in a kingdom composed of provinces that had been separated for many centuries, and had different developments in civilization and education. A new law, enacted in 1877, made school attendance obligatory between 6 and 9 years of age, and required the communes to establish a sufficient number of schools for the school population, and to obtain a sufficient number of teachers to carry on the schools. On this basis the law has by degrees been enforced in all communes of Italy, viz, 8,254 on December 31, 1892. The number of pupils (*vide* p. 322) in public and private elementary day schools has increased from year to year since 1861. In that year the pupils numbered 1,008,674; in 1871 there were 1,722,947; in 1881 there were 1,976,135; in 1892 there were 2,453,939. If we include night schools and Sunday schools, a total of 2,678,240 in school is obtained. The statistics presented by Signor Bodio are as follows:

Elementary education [vide p. 324].

	1871-'72.	1881-'82.	1891-'92.
Public day schools.....	33,556	41,423	49,217
Teachers.....	34,309	42,067	50,819
Pupils.....	1,545,790	1,850,619	2,266,593
Private day schools.....	8,157	5,797	8,395
Teachers.....	9,114	6,088	8,937
Pupils.....	177,157	125,516	187,346
Night schools.....	9,809	6,295	4,241
Teachers.....	11,548	6,295	4,254
Pupils.....	375,947	248,012	a147,607
Sunday schools.....	4,743	3,895	2,890
Teachers.....	5,020	3,295	2,890
Pupils.....	154,585	122,207	b76,694

Total number of elementary day schools in 1891-'92 was 57,612. Total elementary day pupils in 1891-'92 were 2,453,939; in 1871-'72, 1,722,947; increase, 730,992; total number of elementary day pupils in 1891-'92 was 2,453,939; night pupils, 147,607; Sunday pupils, 76,694. Total, 2,678,240.

a Almost all boys.

b Only one-fifth boys.

NORMAL SCHOOLS.

These are established for the preparation of teachers of the elementary grades. The normals are divided into inferior and superior, the former giving a certificate to teach in the lower division of the elementary grades, the latter, a certificate which permits its holder to teach in any of the elementary schools.

Statistics of Normal Schools.

Years.	Schools.					Pupils.		
	Total.	Inferior.	Superior.	For men.	For women.	Men.	Women.	Total.
1891-'92	149	36	113	24	125	2,135	15,898	18,029
1881-'82	121					1,383	7,482	8,865
1871-'72	115					1,631	4,499	6,130

Superior normal training for men is given in the scientific and literary faculties of the universities. For women there are also higher grade institutions in Rome and Florence, where graduates of normal schools can obtain a still more complete course of instruction, such as may be required by those women who desire to become instructresses in normal schools, or in schools above the elementary grade. Such schools for women were established in 1882, and in 1883-'84 there were 105 pupils registered; in 1890-'91 these numbered 181. The course of study covers Italian languages and literature, history, geography, French, English, and German languages and literature; mathematics, physics and chemistry, logic, and psychology; also hygiene and drawing.

SECONDARY INSTRUCTION.

As regards secondary schools Signor Bodio states that the pupils in 1872 numbered 23,798; there was an increase to 87,000 in 1882, and to 113,974 in 1891. In the "licei" there were 71,751 in 1891; in technical schools and institutes, 42,223. Of 56,737 graduates from the "ginnasi" only 15,014 attended the "licei," the balance (41,723) commenced their career with a preparation of classical studies only. This gives about 73 per cent who do not continue a higher grade of education in the "licei" or other special schools. Tabulated statistics are as follows:

	1871-'72.	1881-'82.	1890-'91.
<i>Classical instruction.</i>			
Ginnasi:			
Public.....	a 104	332	350
Pupils.....	8,267	24,874	36,482
Private.....		396	383
Pupils.....		17,937	20,255
Licei:			
Public.....	a 79	131	143
Pupils.....	3,773	8,178	10,360
Private.....		198	167
Pupils.....		4,212	4,654
Total { Schools.....	a 183	1,057	1,043
{ Pupils.....	12,042	55,201	71,751
<i>Technical instruction.</i>			
Technical schools:			
Public.....	a 62	310	329
Pupils.....	6,189	20,823	31,159
Private.....		103	68
Pupils.....		3,023	1,969
Technical institutes:			
Public.....		66	68
Pupils.....		6,924	7,568
Private.....		10	5
Pupils.....	a 68 { 4,849 {	367	232

a Governmental only.

	1871-'72.	1881-'82.	1890-'91.
<i>Technical instruction—Continued.</i>			
Institutes of the Merchant Marine:			
Public	a 25 718	23	20
Pupils		655	1,289
Private		2	1
Pupils		6	6
Total { Schools	155	514	491
{ Pupils	11,756	31,798	42,223
Grand total { Schools	338	1,571	1,534
{ Pupils	23,798	86,999	113,974

a Governmental only.

EDUCATION OF WOMEN.

As to the education of women (*vide* p. 328), it is stated that girls receive a higher grade of instruction than that of the five elementary classes in so-called "educatories," conservatories, and colleges. A small proportion of these institutions may be classed as superior or complementary schools, and are annexed to the colleges for girls which are supervised by the government. Some are supported by provinces and communes, but the larger number are maintained by private corporations or associations. The oldest and most thoroughly established are those maintained by the municipalities of Milan, Turin, Asti, Genoa, Venice, Padua, and among those established at a later date are those of Bologna, Florence, and Rome.

The programme and course of study vary in these different institutions. Women are admitted to both classical and technical schools, the technical schools being the most frequented by them. In 1891 there were sections for women in 141 of the technical schools, and 1,498 women attended. There are also technical schools for women exclusively. Women are admitted to university privileges, and are most frequently to be found in attendance upon the faculties of natural sciences, and medicine and surgery. Among the women who frequent the institutes of a higher grade than secondary schools it is stated that the majority attend special courses of study, but do not endeavor to obtain academic degrees.

AGRICULTURAL EDUCATION.

The Italian Government justly recognizes the fact that agricultural, industrial, and commercial pursuits tend toward the prosperity of the people. Signor Bodio presents this phase of education as follows:

Elementary instruction in agriculture is given in the practical schools of agriculture which were opened in those sections of Italy where the agrarian economy required such special study. These schools are supported by the Government, provinces, and communes, by corporations or by private individuals. To be admitted to such schools requires the student to have finished the lower elementary course, or to have passed a similar examination. The instruction is both theoretical and practical; the latter includes work by the students in all forms of husbandry and agricultural operations, the endeavor being to suit the instruction to the locality. Special agricultural schools aim to give instruction in regard to the production of wines, oil, and cheese, the cultivation of vines, and fruits. The practical and special schools are governmental schools, and there are agricultural sections in other governmental schools. The elements of agricultural science are taught in certain normal schools for both men and women. In 1890-'91 such instruction was given in 20 normals for men, and 11 for women. The number of pupils to date who have passed an examination in this branch is 694.

In 555 elementary schools of the higher grade in 1890-'91 the elements of agriculture were taught. Lectures under governmental auspices are given throughout the rural districts of Italy by eminent authorities on the diseases of plants and vegetables. The highest grade of instruction in agriculture is given in the superior schools of agriculture in Milan and Portici, and in the agricultural school annexed to the University of Pisa. To be admitted to this class of schools the student must possess the "licenza liceale," or have graduated from the course of agriculture and surveying in the technical institutes. Graduation from the superior schools of agriculture entitles one to the certificate of doctor in agrarian science and prepares the graduate to be a teacher of agricultural science. Agricultural experiment stations (Stazioni agrarie), for the promotion of more scientific methods, with laboratories for study and experiments, have been established by the Government in some districts. There are also special academies or societies of agriculture for the promotion of scientific and practical agricultural studies. These are found in Rome, Florence, Turin, Pesaro, Palermo, and Milan. Education in this line is also aided by national and local agricultural conventions and exhibitions.

INDUSTRIAL, PROFESSIONAL, AND COMMERCIAL EDUCATION.

Industrial training is given in the Schools of Arts and Trades (*Scuole di arte e mestieri*) and in the schools of art as applied to industry (*Scuole di arte applicata all' industria*), the aim of these schools being to train skilled workmen for factories and workshops. The students obtain scientific training as applied to industries and trades. The superior or higher grade schools of art, as applied to industry (*Scuole superiori di arte applicata all' industria*) endeavor to cultivate the artistic or aesthetic side of the workingmen. The government, provinces, municipalities, chambers of commerce, and local corporations unite in the maintenance of these schools. Admission is granted to students who have finished the elementary course or have passed a similar examination to that given at the close of this course.

The schools of mines, under similar maintenance, give practical education in mining; the students are taken to the mines and sulphur mines to see the actual workings. Admission is granted to graduates of the higher elementary course, or to those who pass an equivalent examination.

Industrial schools for women train for special trades, or in sewing, embroidery, flower-making, etc.

The highest grade of industrial, professional, or commercial training is found in the following institutes maintained by the government, provinces, and communes.

The Industrial Museum in Turin, which has large laboratories and collections of patterns and instruments, and a commercial museum, aims to train students for the chemical and mechanical industries, for experiments in physics, and applied electricity, and to train teachers for the technical institutes and higher industrial schools.

The Superior Naval School in Genoa aims to perfect the instruction given in the mercantile marine institutes and to train naval engineers and machinists and captains of the naval service. Teachers for the institutes of the merchant marine are also trained here.

The Superior School of Commerce in Venice is notably a business high school, aiming to prepare graduates from the technical institutes for commercial pursuits and banking. As a means of promoting trade with the Eastern countries there is a course in the Arabian, Turkish, and Japanese languages. This school also prepares teachers for the commercial courses in the technical institutes and trains young men for the consular service. The higher commercial schools of Bari and Genoa have a similar aim and a similar curriculum of study.

Industrial, professional, and commercial.	Date of establishment.	Scholastic year.	Schools.	Students.
Schools of arts.....		1889-90	57	8,054
Schools of arts applied to industries.....		1889-90	75	7,752
Superior schools of arts as applied to industries.....		1889-90	6	888
Special schools for the same.....		1889-90	19	1,483
Industrial schools for women.....		1889-90	15	5,050
Industrial museum in Turin.....	1862	1890-91	1	98
Superior Naval School in Genoa.....	1870	1890-91	1	143
Superior School of Commerce in Bari.....	1886	1890-91	1	71
Superior School of Commerce in Genoa.....	1884	1890-91	1	44
Superior School of Commerce in Venice.....	1868	1890-91	1	113
Total.....			177	23,696

SUPERIOR AND SPECIAL STUDIES.

Higher education is given in the universities and in some superior institutes. The universities prepare young men, who are graduates from secondary schools, for those professions for which special studies are required, as by such study the intellectual life of the nation is enhanced. In the superior institutes special branches are taught and application is made of mathematical sciences.

The universities of Italy are 21 in number, 17 supported by the Government, the 4 others free universities—that is, supported by their own funds or by provincial and communal authorities. The 17 universities also receive provincial or communal aid in the establishing of laboratories and annexed schools, and in collecting scientific apparatus. Some of the superior—or higher—institutes also receive aid from similar sources and for similar purposes. Eleven of the superior institutes are maintained by the Government and are under governmental supervision.

Of the governmental universities Bologna, Catania, Genoa, Messina, Naples, Padua, Palermo, Pavia, Pisa, Rome, and Turin have all four faculties, namely, law, medicine and surgery, physical and mathematical sciences, literature and philosophy. Cagliari, Modena, and Parma lack the faculty of philosophy. Sassari and Siena have the faculties of law and medicine; Macerata that of law. Among the free (libere) universities Ferrara has three faculties, but like Parma and Modena lacks the faculty of philosophy and literature. Camerino¹ and Perugia have the legal, medical, and surgical faculties. Urbino has faculties of law and science. Schools of pharmacy and obstetrics are annexed to all universities.

The University of Pisa has a superior school of agriculture annexed to it; the universities of Padua, Palermo, Pavia, and Pisa have each a school of applied engineering annexed to the faculty of science. The schools annexed to the universities of Pisa and Pavia have only the first year of the course of study.

There are scientific museums, laboratories and clinics for medical training attached to the universities and to the annexed schools where requisite. Observatories² belong either to the universities, or are entirely independent of them, as in Milan, Naples, Rome, Florence, Venice, and Forli.

There are schools of applied engineering in Bologna, Rome, Naples, and Turin. The superior technical institute of Milan is a school for applied mathematics and serves as a higher school for the preparation of teachers of physics, chemistry and natural sciences in institutes for secondary education.

The Institute for the Perfecting of Higher Studies in Florence possesses clinical schools, botanic specimens, laboratories and scientific museums. It has courses in literature, physics, and natural sciences, medicine and surgery, pharmacy and obstetrics. The students in literature, physics, and natural sciences are usually preparing to be teachers in secondary schools.

¹ Camerino founded in 1727; a typographical error on p. 333 making the date 1427.

² There are 191 meteorological stations either connected with the observatories, independent of them, annexed to practical schools of agriculture, or connected with harbor and shipping interests.

The Scientific and Literary Academy of Milan, which has an annexed course in foreign languages, has courses in philosophy and literature. The Superior Normal in Pisa prepares teachers for secondary institutes in its courses in philosophy, literature, mathematics and natural sciences. The Superior Institute for the Study of Social Sciences, founded and endowed in Florence by Senator Carlo Alfieri di Sostegno, aims to promote economic and political studies, to prepare young men for political life, and for the diplomatic and consular service.

The course of study in the various faculties differs somewhat in length. The faculty of law has a four years' course, and the degree of doctor of law is conferred. A two years' course leads to a diploma of solicitor or notary. Attendance at the bar for two years and a special practical examination are required of those who desire to exercise the legal profession as attorney-at-law or solicitor. The curriculum of the faculty of literature and philosophy is of four years, and graduation therefrom entitles to the degree of doctor in literature and philosophy. After completion of a two years' course the student may obtain a certificate enabling him to teach literature in the three lower classes of the "ginnasi," and in the technical schools. The faculty of mathematics, physics and natural sciences has a four years' course, the studies of the first two years admitting to the schools of applied engineering. A completion of the entire course entitles the graduate to one of the four degrees, viz: Doctor of mathematics, of physics, of chemistry, of natural sciences. Students of these three faculties, if they have attended the annexed school, are qualified to receive a certificate as teacher in the secondary schools. A six years' course is found in the faculty of medicine, and its completion leads to the degree of doctor in medicine and surgery, which permits the free practice of the medical profession. On completion of the fourth year of study the students are expected to regularly attend the clinics.

The schools of pharmacy after four years of study give an apothecary's diploma, which is required before becoming a pharmacist; one of these years must be passed in a drug store. Another year of study entitles one to the degree of doctor in chemistry and pharmacy. The course of study in the veterinary schools annexed to the universities¹ is of four years, and graduation therefrom entitles to the degree of veterinary surgeon and the practice of the profession.

In the schools for obstetrics annexed to the universities the two years' course of instruction is both theoretical and practical. The practical course requires one year; the theoretical two years of study. On completion of the course a certificate, enabling one to practice as a midwife,² is accorded.

The length of the courses in the superior institutes varies according to the studies to be pursued. Admission to the school of applied engineering requires a two years' course in the faculty of mathematics in a university and the passing of a required examination. Completion of the three years' course in the engineering school, if the examination is passed, entitles to the degree of civil or industrial engineer or architect, with permission to practice the chosen profession. During the course practical experiments and excursions to the most important industrial or mechanical establishments or to some public works are of great advantage to the students. The superior institute for the perfecting of higher studies, in Florence, has courses of study similar to the faculties of literature and philosophy, mathematical and natural sciences, medicine, and surgery, and confers corresponding academical degrees. The academy of science and literature in Milan has a curriculum similar to that of a university faculty in literature and philosophy. Completion of the four years' course entitles to the doctor's degree.

The instruction in the universities and the superior institutes is given by professors appointed after a competition among persons who have obtained the degree of university doctor in the corresponding science or department or after due

¹A similar course is found in the veterinary schools of Milan, Naples, and Turin.

²The schools connected with the maternity hospitals in Milan, Novara, and Venice accord the same certificates.

examination. But if a man is celebrated through his publications, discoveries or scholarship in the special branches which he desires to teach, such a person may be appointed by the Government without the competition. There are three kinds of professors: The ordinary, the extraordinary, and the "professori incaricati." These last mentioned professors sometimes gravitate into the extraordinary professorships and then again become ordinary professors. The ordinary professors are sometimes required to give other instruction than that which comes into their especial line. There are also private teachers (*liberi docenti*) who deliver lectures on special subjects appertaining to higher culture. They are also allowed to instruct in the regular university course, and they may have the same legal rights as other professors, if the course of instruction is equally extensive. Governmental recognition of them is obtained after an examination indicating their scientific experience. University students pay a registration fee, annual tuition fees, fees for graduation, and for the diploma required by each faculty or each special course of study.

There are fees in the superior institutes in accordance with special laws. The fees in the free universities are determined by the authorities, which have a controlling action in the administration of their affairs.

ACADEMIES OF SCIENCE AND LITERATURE.

The following information, courteously furnished by Signor Bodio, serves to complete the presentation made by Professor Oldrini:

Among the principal academies which aim to promote original studies and research in history and science, and among which are some receiving annual subsidies from the Government, may be named—the Royal Academy of the Lincei, in Rome; the Royal Lombard Institute of Science and Literature, in Milan; the Royal Institute of Science, Literature, and Art, in Venice; the Royal Academy of Sciences, in Turin; the Royal Society of Sciences, in Rome; the Pontomiana Academy and Royal Society, in Naples; the Royal Academy of the "Studio di Bologna."

The "Lincei" in Rome dates from 1603 and was founded by Frederic Cesi, a friend of Galileo Galilei. Some of the noteworthy scientific discoveries of the seventeenth century, originating in experimental methods in physics and natural sciences, emanated from this academy. The Academy of the Crusca, created in 1587, has as special aim the study of the Italian language and the formation of a dictionary of that language. Committees and local societies ("Deputazioni di Storia Patria" and "Società di Storia Patria") aim to promote historical research, to collect and publish ancient documents bearing upon the political life, customs, and traditions of each part of the country. An Italian Historical Institute, founded in 1883 in Rome, is composed of men named by these committees and societies, or by the Government.

The Italian Historical Institute, the committees¹ and societies for the study of the history of the fatherland, receive annually subsidies from the State. Among the various scientific associations for the promotion of special branches of knowledge, are the medical² academies, the societies of natural³ science, the anthropological⁴ societies, the paleontological⁵ society, societies of engineers and architects,⁶ societies for economic⁷ and social studies. Lately established in Rome is an Italian geograph-

¹ There are "committees for the study of the history of the fatherland," in the subdivisions of Piedmont and Lombardy, in Turin; for the Marches, in Ancona; for Umbria and Tuscany, in Florence; for Parma and Piacenza, in Parma; for the Romagna, in Bologna. There are "societies for the study of the history of the fatherland" in Genoa, Naples, Rome, Palermo, Venice, Milan, Como, and Mirandola.

² In Turin, Naples, Rome, Milan, and Palermo.

³ In Florence.

⁴ Societies of anthropology, ethnography and comparative psychology in Florence; society of anthropology in Rome.

⁵ In Rome.

⁶ In Rome, Milan, Turin, Naples, and other cities.

⁷ The Academy of the Georgofili, in Florence; the associations for economic science, in Naples, Palermo, etc.

ical society which has more than 1,000 members, and there are minor associations in Naples, Florence, and Milan for the promoting of commercial explorations and the opening of new fields for Italian industry and trade.

FINE ARTS AND MUSIC.

The Government supports 15 institutions for instruction in fine arts (architecture, painting, and sculpture). These "accademie e scuole di belle arti"—some of them very ancient, others more modern—are maintained and administered by the State. Being recognized as corporate bodies they may receive legacies, and have their own incomes. Additional to these governmental institutions are other autonomous institutions.

Instruction in the fine arts is given also in some academies of science and literature¹ and in academies of art.²

The Bologna Institute of Fine Arts was established September 1, 1803; the Carrara Academy, September 26, 1769; the Florence Institute in 1350; Lucca Institute, March 5, 1850; the Schools of Fine Arts, in Massa, in 1835, established as an Institute in 1851; the Milan Academy, on January 22, 1776; the Modena Institute of Fine Arts was opened as a school of fine arts on January 3, 1786; on September 18, 1790, it had developed into the Atestina Academy of Fine Arts; the Naples Institute, established in 1822; that of Palermo, on November 20, 1879; that of Parma, on December 2, 1757; the School of Drawing for Workmen in Reggio-Emilia, in 1803; the Institute of Fine Arts in Rome, on January, 1874; the Albertina Academy, in Turin, in 1632, remodeled in 1833; the Institute of Fine Arts of Venice, in 1808, and called at that date the Academy of Fine Arts; the Institute of Fine Arts of the Marches, in Urbino, remodeled under its present title on January 6, 1861. The statistics of these institutions of fine arts in 1890-91 were: Teachers, 177; students, 3,729.

There are five institutes for instruction in music which receive governmental subsidies. There are also a few institutes and schools established by private citizens, such as the Musical Institute of Pesaro (founded by Rossini), and that of Rome. The total statistics for 1890-91 were: Teachers, 160; women students, 305; men, 575; grand total, 870 (*vide* p. 336).

MUSEUMS, ANTIQUITIES, AND NATIONAL MONUMENTS.

The regulations which govern the conservation of antiquities and national monuments are referred to by Signor Bodio as follows: In order to preserve the many treasures that Italy possesses there are many museums and galleries of sculpture and painting under governmental charge; the communes, corporations, and some private individuals possess similar collections. The Government maintains, and has general supervision of the ancient ruins, edifices, monuments, etc., which appertain to the history of art, or of the nation; the provinces and communes care for other monuments which are not of a national character. Each subdivision and district of Italy has its committees (*commissariati per l' antichità e belle arti*) appointed by the Government, its governmental inspectors, and local boards (*commissioni conservatrici per l' antichità e belle arti*) appointed in part by the Government and in part by provincial and communal authority. The duties of these boards and inspectors are to supervise and maintain antiquities, monuments, and galleries.

LIBRARIES.

There are numerous libraries in Italy, many of which are important factors in advancing culture on account of the valuable collections of books and manuscripts which they possess.

¹ The Academy Petrarca, of Arezzo; the Virgilian Academy, of Mantua; the Peloritana Academy, of Messina; the Academy of Science and Literature, of Padua.

² The Academy of St. Luke, in Rome, is one of the most ancient.

The libraries belong either to the Government, the provinces, the communes, or they may be adjuncts of charitable institutions, institutes of science and literature, associations, or schools. Among the governmental libraries are the "Biblioteche autonome," those annexed to universities, to special schools, or to institutions of science and art. The "Biblioteche autonome" are self-governing, so-called national libraries, which receive copies of all books published in Italy. The Victor Emanuel Library, in Rome, and the National Library in Florence, are the most important. Then there are other governmental libraries which bear the title governmental only; some of these are annexed to the universities. The Government annually endows such libraries and gives extra subsidies if required.

The provincial and communal libraries are maintained from provincial and communal funds, although many of them have special funds and donations, as have some governmental libraries, the income of which is added to their annual endowment.

In order to increase the means of educating the people, libraries have been established, of late years, by societies for the promotion of education. Circulating libraries, also, aid in instructing the people. The latest statistics of libraries in Italy are as follows, although not entirely complete:

Governmental	29
Annexed to universities	15
Belonging to other higher educational institutes.....	9
Provincial and communal	419
Annexed to institutes for primary and secondary education.....	311
Annexed to higher military organizations	46
Annexed to governmental archives and offices	48
Libraries of academies, observatories, scientific institutions	182
Established by private societies, Societies of Friends of Education, circulating libraries	542
Belonging to seminaries and archbishoprics	179
Belonging to hospitals, church organizations, and charitable associations....	28
Total	1,818

Private individuals also possess libraries, with interesting collections of documents and manuscripts, which are open to the general public under certain regulations. In 1890-91, in 132 of the most important libraries, the number of books read was 1,067,462; the readers, 943,903.

PUBLICATIONS AND THE PRESS.

The publications appertaining to science and literature printed in Italy in 1892 were more than 10,000. Divided according to subject-matter, they may be enumerated as follows: Instruction and education, 365; school books, 745; philology, history, and literature, 325; philosophy and theology, 79; modern literature, 1,167; jurisprudence, 330; politico-social sciences, 436; physics, mathematics, and natural sciences, 356; medicine, 705; engineering, railroads, 149; agriculture, industry, and commerce, 1,059; history and geography, 557; contemporary biography, 448; fine arts, 153; army and navy, 137; bibliography, 71; religion, 816; encyclopædias, 4; academy reports, 23; parliamentary acts, 558; by-laws and finance, 927; new political newspapers, 332; musical publications, 410. Total, 10,182. Modern Italian language, 9,444; Latin language, 212; balance (modern languages), 526.

The number of journals, magazines, and reviews in the year 1871 was 765; in the year 1891 it amounted to 1,779. The grouping is as follows: Political, 512; newspapers, 62; jurisprudence, political economy, social sciences, 307; agriculture, industry, commerce, and finance, 184; literature, science, history, archæology, bibliography, 148; educational and didactic, 76; physics, mathematics, industrial technology, 32;

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medicine, anthropology, and natural history, 119; geography and travels, 11; musical and dramatic, 30; fine arts, 11; military, 15; religion, 120; fashion, humoristic, Sunday periodicals, 130; railroads, 22.

GENERAL, PROVINCIAL, AND MUNICIPAL SCHOOL ADMINISTRATION.

Although the communes and provinces participate in the expenditure for education, yet the supervision and direction of educational institutions is vested in the State. The State, or Government, endeavors to extend education by means of schools and by encouraging the establishment of all such institutions as are useful to the intellectual life of the people, such as academies of science and literature, libraries, museums, institutes of fine arts, and musical conservatories. The preservation of national monuments serves towards this end also. The ministry of public instruction is in general charge of education; its attributes are determined by law of 1859, with modifications and laws of later date. The minister of public instruction is assisted by a superior council of education (*consiglio superiore della pubblica istruzione*), to which, in accordance with fixed laws, all matters of educational legislation or administration must be submitted by the minister. He in turn may question the council in regard to all subjects appertaining to his department of public affairs. The minister of public instruction exercises his authority throughout the provinces by means of a body of school superintendents (*provveditore agli studi*), one for each province. They have general supervision of elementary and moral instruction, of secondary and classical instruction, and the technical schools.

The direct inspection of elementary schools is intrusted to the school inspectors (one for each district), who are under the direction of the superintendent, or *provveditore*. For the elementary schools there is also another local official, a "*delegato scolastico*," who is appointed by the Government, and who has in each commune, or groups of communes, the supervision of elementary schools, especially as regards the extending of educational facilities, the moral and physical education of the children, and the application of the law of compulsory education. This scholastic deputy is an aid of the school inspectors, and his duties are gratuitously performed.

The technical institutes and the institutes of the merchant marine are under the direct charge of the minister of public instruction. Each of these institutes has a director (*preside*), who is in charge of the scholastic affairs and discipline. To aid in the administration of these institutes there is a council of supervision (*giunta di vigilanza*), composed of members named by the state, province, and commune where the institute is situated. The universities are governed by rectors and academical councils, yet are under the supreme control of the ministry of public instruction. The other institutes, which are dependent upon the Government, such as academies, libraries, museums, etc., have their own administrative officers, who are assisted by committees of members appointed by local corporations and by the Government.

Many of the higher special or professional schools are not in affiliation with the ministry of public instruction, but with that of agriculture, industry, and commerce. As an adjunct to this ministry, to aid in extending agricultural and industrial education, there are two councils—the one for agricultural development, the other for industrial or professional training. The various professional schools are directly governed by councils or committees, appointed partly by the Government, partly by provinces and communes, as all assist in defraying the expenses.

MAINTENANCE OF AND EXPENDITURES FOR EDUCATIONAL INSTITUTIONS.

The expenditures for education are borne partly by the Government, in part by the provinces and communes. Charitable organizations contribute towards educational expenses either by direct maintenance of elementary or secondary schools or by assistance to students; other local organizations participate in the expenses for special school purposes. The maintenance of elementary schools is entirely assumed

by the communes, but if the necessary funds are lacking, aid is given in the shape of governmental subsidies, so that the compulsory-education act may be enforced. Elementary teachers receive pensions from funds annually set aside for that purpose by the Government. In accordance with special laws the Government maintains colleges for women for both elementary and complementary instruction.

The Government supports the normal schools as far as the director's salary, free tuition, and cost of scientific material is concerned. The provinces and communes defray the building expenses and the purchase of the apparatus. The "licei" are maintained by the Government as regards professors' salaries and expenditures for scientific material; the remaining expenses are met by the communes. The "gin nasi" are maintained by the communes; in some provinces, in accordance with special laws, they are supported by the Government.

The cost of maintaining the technical schools is defrayed by the communes, the Government, however, paying half of the professors' salaries. The technical institutes and those of the merchant marine are maintained by the joint contributions of Government, provinces, and communes, the Government bearing about half the costs. The schools of agriculture and the industrial trade and professional schools are supported by united contributions from the communes and boards of trade of the towns where they are situated; the Government adds its quota by establishing and in part maintaining them. The maintenance of the universities and superior institutes depends almost entirely upon the Government, but, in accordance with special regulations, the provinces, communes, and boards of trade unite with the Government in means of improvement of such institutions. The Government, provinces, and communes bear the expenses of maintaining and adding to the collection of antiquities, of maintaining galleries, museums, monuments, and of increasing the academies and institutes of fine arts, libraries, etc. Assistance is also given in the form of prizes, bursaries, and other aid to students desiring to pursue a course of study and otherwise unable to do so.

Expenditures for education.

STATE.

	Lire.
General expenditures of the central administration	1, 936, 273
General expenditures of the local administration	1, 120, 806
Universities and other higher institutions	10, 350, 173
Institutes, scientific and literary organizations	1, 644, 551
Antiquities and fine arts—ancient art, 2,547,941; modern art, 1,683,696 ..	4, 231, 637
Classical education	7, 263, 036
Instruction in agriculture	1, 952, 456
Commercial, industrial, and professional	7, 923, 041
Normal and elementary education	7, 444, 064
Various expenses	83, 100

COMMUNES (BUDGET 1889).

General expenditures for education and improvement	4, 596, 325
Common and normal schools	58, 455, 248
Classical and technical education	7, 247, 245
Agricultural, commercial, industrial, and professional schools	1, 686, 489
Various expenses	861, 050

PROVINCES (BUDGET 1889).

General expenditures for education and improvement	2, 387, 624
Elementary and normal schools	797, 373
Classical and technical schools	2, 317, 245
Agricultural and professional schools	651, 179

Total annual expenditures by the Government and local authorities may be reckoned as amounting to 122,948,809 lire, or \$23,729,200.

The expenditures for school purposes by charitable organizations as presented in the statistics of such organizations for 1880, the latest given, amounted to 5,429,476 lire, or \$1,047,888. In addition to the aid given by corporations and boards of trade, there are workingmen's associations, which participate more especially in the industrial side of elementary instruction. From these sources, as is stated by Signor Bodio, about 615,000 lire, or \$118,695, was expended in 1890-91.

PART I.

CHAPTER I.

STATISTICS OF STATE COMMON SCHOOL SYSTEMS.¹

NOTE.—This chapter relates to public day schools of elementary and secondary grade (primary, grammar, and high schools).

SUMMARY.

The following statement is made up from returns for 1890-91, with the exception of a part which is derived from 1889-90. The numbers here given are therefore subject to future correction. The percentages, however, will not be appreciably altered.

GENERAL STATISTICS.

Population of the United States (estimated).....	63,521,196
Number of persons 5 to 18 years of age (estimated).....	18,799,864
Per cent of the population.....	29.61
<hr/>	
Number of pupils enrolled in the common schools.....	12,966,061
Increase	342,994
Percentage of increase	2.72
Enrolled per 100 persons 5 to 18 years of age.....	68.95
<hr/>	
Average daily attendance	8,329,234
Increase	201,240
Percentage of increase	2.48
Ratio to enrollment (per cent).....	64.2
<hr/>	
Aggregate number of days' attendance	1,129,955,876
Average number of days the schools were kept	135.7
Increase, in days.....	1.0
Average number of days attended by each pupil enrolled.....	87.1
<hr/>	
Number of public schoolhouses	226,884
Increase	3,856
<hr/>	

¹ Classification by race, as far as possible, is given in Chapter XXV, "Education of the Colored Race."

Number of teachers:

Males.....	124, 449
Females	244, 342

Total.....	368, 791
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Percentage of male teachers.....	33. 7
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Average monthly wages of teachers:

Males.....	\$44. 89
Increase 21
Females	\$36. 65
Increase 42

FINANCES.

Revenue:

From permanent funds.....	\$8, 296, 347
From State taxes	27, 631, 657
From local taxes.....	100, 358, 635
From other sources	11, 628, 643

Total.....	147, 915, 282
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Increase of State taxes	\$2, 393, 088
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Increase of local taxes	4, 227, 519
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Percentage of revenue derived from—

	Per cent.
Permanent funds	5. 6
State taxes	18. 7
Local taxes	67. 8
Other sources.....	6. 9

Expenditure:

For sites, buildings, furniture, libraries and apparatus	\$25, 851, 261
For salaries of teachers and superintendents	95, 791, 630
For other expenses.....	25, 157, 272

Total.....	\$146, 800, 163
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Increase	\$7, 393, 377
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Percentage of increase	5. 30
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Expenditure per capita of population.....	\$2. 31
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Expended per pupil in attendance.....	\$17. 62
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Cost of education per pupil per month:

For salaries only.....	\$1. 70
For all purposes	\$2. 60

Remarks upon the tables.

The following tables present in detail the common school statistics of the different States, mainly for the school year 1890-91. Several States failed to supply this office with figures in season for publication in the present report. The totals given for the United States and its several geographical divisions are therefore subject to future correction.

It is frequently the case in the tables of the printed reports of State superintendents that one or more counties have been excluded through their not having made any report to the State superintendent. This complete omission is equivalent to giving such counties zero in footing

up the totals, and explains in many cases the great falling off in school attendance, expenditure, etc., that appears to have suddenly taken place in this or that State.

Whenever practicable the figures for these missing counties have been supplied by the bureau, using the latest returns available or some reliable estimate. This gives totals for the State, which, though not exact, are considerably nearer the truth than if the missing counties were given 0.

Care has been taken to make the tables as correct and useful as possible, though some imperfections have resulted from delayed returns. Attention has been paid to tabulating only percentages and percapitas which are of value in estimating the relative educational condition of different localities, omitting those which are misleading, as well as those which possess no special significance. The observations made upon this subject and upon statistical methods generally are commended to the attention of those interested in such matters; the design has been to make some contribution toward the accurate and uniform compilation of school statistics.

TABLE 1.—*Total population, school population, and adult male population.*

State or Territory.	Estimated total popula- tion, 1891.	School population.				Estimated number of adult males (21 years and over), 1891.
		Estimated number of children 5 to 18 years of age, 1891.	Per cent the school popula- tion was of the total popu- lation in—			
			1870.	1880.	1890. <i>a</i>	
1	2	3	4	5	6	7
			<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	
United States	63,521,196	18,799,864	31.27	30.04	29.61	17,191,053
North Atlantic Division.....	17,653,483	4,483,098	28.30	26.87	25.39	5,127,890
South Atlantic Division.....	8,973,046	3,053,273	33.02	32.24	34.04	2,042,671
South Central Division.....	11,104,996	3,857,715	33.92	33.13	34.76	2,535,690
North Central Division.....	22,627,357	6,637,067	32.40	30.63	29.33	6,276,826
Western Division	3,162,314	768,711	25.57	25.13	24.33	1,208,006
North Atlantic Division:						
Maine	659,800	162,300	28.01	25.71	24.60	206,900
New Hampshire.....	379,600	84,600	24.75	22.80	22.29	119,100
Vermont.....	329,300	81,180	27.18	25.96	24.65	100,730
Massachusetts.....	2,275,200	520,300	25.51	23.98	22.87	675,800
Rhode Island.....	350,200	85,380	25.66	24.64	24.38	101,400
Connecticut.....	757,150	178,200	25.86	24.97	23.54	227,400
New York.....	6,080,300	1,496,600	28.09	26.32	24.57	1,796,800
New Jersey.....	61,444,933	6376,233	29.01	27.98	26.04	6413,530
Pennsylvania.....	5,367,000	1,498,300	30.55	29.43	27.92	1,492,200
South Atlantic Division:						
Delaware.....	6168,493	647,491	31.84	29.11	28.19	647,539
Maryland.....	1,053,800	308,500	31.30	29.89	29.28	273,700
District of Columbia.....	244,000	61,940	27.01	26.87	25.38	68,320
Virginia.....	1,678,000	573,200	32.39	32.43	34.16	383,800
West Virginia.....	779,200	262,000	34.13	33.37	33.62	185,300
North Carolina.....	1,637,900	579,000	33.60	32.30	35.35	346,900
Sou h Carolina.....	1,168,000	433,800	33.15	33.21	37.14	239,100
Georgia.....	61,837,353	6652,342	34.42	33.17	35.50	6398,122
Florida.....	406,300	135,000	34.03	32.82	33.23	99,870
South Central Division:						
Kentucky.....	1,900,300	618,200	34.41	33.14	32.76	457,700
Tennessee.....	1,893,900	617,400	34.13	33.44	34.22	410,800
Alabama.....	61,513,017	6540,226	34.40	33.37	35.70	6324,822
Mississippi.....	1,306,600	479,400	33.70	34.12	36.69	274,600
Louisiana.....	1,138,200	387,500	31.11	31.93	34.04	255,000
Texas.....	2,314,800	812,400	34.80	32.60	35.10	554,900
Arkansas.....	61,128,179	6402,589	34.16	33.15	35.68	6257,868
Oklahoma.....					30.18	

^a The estimates of the total and the school population for 1891 are made on the basis of the percentages of 1890, as no new determinations of these quantities will be made until 1900.

^b In 1890 (U. S. Census).

TABLE 1.—*Total population, school population, and adult male population—Continued.*

State or Territory.	Estimated total popula- tion, 1891.	School population.				Estimated number of adult males (21 years and over) 1891.
		Estimated number of children 5 to 18 years of age, 1891.	Per cent the school popula- tion was of the total popu- lation in—			
			1870.	1880.	1890. <i>a</i>	
1	2	3	4	5	6	7
North Central Division:						
Ohio.....	3,697,000	1,048,900	<i>Per cent.</i> 31.74	<i>Per cent.</i> 29.75	<i>Per cent.</i> 28.37	1,023,300
Indiana.....	2,192,404	6647,606	33.75	31.37	29.54	6595,066
Illinois.....	3,880,600	1,096,700	32.24	30.66	28.26	1,087,900
Michigan.....	2,133,600	592,400	30.28	28.37	27.77	629,100
Wisconsin.....	1,727,000	516,200	33.57	30.85	29.88	472,800
Minnesota.....	2,130,182	6376,678	32.45	30.43	28.93	6376,036
Iowa.....	1,934,000	583,500	33.06	31.40	30.17	526,400
Missouri.....	2,736,500	851,300	33.57	32.35	31.11	720,800
North Dakota.....	6182,719	649,881	{ 23.74	{ 24.34	27.30	655,959
South Dakota.....	6328,808	696,302			29.29	696,765
Nebraska.....	1,106,300	333,200	28.07	29.88	30.12	315,000
Kansas.....	1,406,600	444,400	29.83	31.73	31.59	377,700
Western Division:						
Montana.....	149,300	26,960	10.20	17.10	18.06	73,870
Wyoming.....	67,420	14,420	9.39	18.06	21.33	30,100
Colorado.....	6412,198	690,703	22.47	18.72	22.00	6164,920
New Mexico.....	157,500	44,200	31.90	29.85	28.07	46,090
Arizona.....	659,620	615,153	16.78	19.59	25.42	623,696
Utah.....	221,000	71,720	35.05	33.39	32.45	57,900
Nevada.....	645,761	610,009	12.56	18.22	21.87	620,951
Idaho.....	684,385	622,839	11.30	22.98	27.07	631,490
Washington.....	421,200	95,590	26.96	27.19	22.69	177,100
Oregon.....	335,800	90,540	32.34	28.63	26.96	119,600
California.....	61,208,130	6286,577	24.48	25.03	23.72	6462,289

a The estimates of the total and the school population for 1891 are made on the basis of the percentages of 1890, as no new determinations of these quantities will be made until 1900.

b In 1890 (U. S. Census).

POPULATION AND SCHOOL POPULATION.

Although the census of 1890 has gathered the material for determining the number of children of each year of age in the several States, the results have not been published at the date of preparation of this report.

A preliminary census bulletin has been issued, however, giving for each State the number of persons 5 to 18 years of age in 1890; this age has been considered by the Census Office for several decades past as the "school age," and has been, therefore, adopted in this report as furnishing the only enumeration of children that is uniform in all the States as regards the ages included, and extending from 1870 to the present time.

The number of persons of each individual year of age was not published in the census reports until 1880.

The figures in column 3 of the preceding table are based on those of the census bulletin referred to, but have been reduced in most cases to the date 1891, as have also been those of the total population in column 2.

The total population of the United States for the year under consideration (1890-'91 for most of the States) is found to have been 63,521,196.

Of this number, 18,799,864 were between 5 and 18 years of age. Since all these were of a suitable age for attending the common schools (elementary or secondary), and since in point of fact nearly all the common-school attendance was drawn from them, they may be called the "school population."

The proportion of the school population to the total population has undergone a marked change during the past twenty years, as may be seen from an examination of columns 4, 5, and 6 of the table. In 1870 the school population of the United States formed 31.27 per cent of the total; in 1880, 30.04 per cent, and in 1890, 29.61 per cent.

There has been going on, then, a constant decrease in the number of children as compared with the total population.

This decrease has mainly occurred in the north and west; in the North Atlantic and North Central States the decrease in the proportion of children has been about 3 per cent since 1870 (from 28.30 to 25.39 in the former and from 32.40 to 29.33 in the latter).

In the Southern States, as a whole, on the contrary, the proportion of children, always large when compared with the North (now about one-third larger), has undergone some increase since 1880, so that now it is larger than in 1870.

The proportion of children in individual States exhibits marked contrasts, even when the States are contiguous. New York is the most populous State in the Union, but Pennsylvania has the largest number of children between 5 and 18 (1,498,300). In the former State the proportion of school population is 24.57 per cent, in the latter, 27.92 per cent. This circumstance may throw some light on the fact that the reported average attendance of pupils in Pennsylvania has for many years considerably exceeded that of New York.

In South Carolina 37 persons out of every 100 are children of school age; at the other extreme stands Montana, with only 18 out of 100, or less than one half the number in South Carolina.

The relation between the school population and the number of adults (column 7) in the different States is yet more marked. Taking the same two States, South Carolina and Montana, for instance, there are found in the former 433,800 school children to 239,100 male adults; in the latter, 26,960 school children to 73,870 male adults.

These facts are of importance in comparing the status of the schools of different localities, though they have not received from educational writers the attention they merit. Some of the considerations they give rise to are pointed out in the following pages, especially in treating of school revenue (or support) on page 24.

The school population classified by age.

As has been already remarked, the age tables of the Eleventh Census have not yet been published. Using the percentages of 1880, the number of children of each year of age in the school population of 1891 may be approximately stated as follows:

Age of the school population, 1891.

Age.	Estimated number of children.	Per cent of the school population.	Per cent of the total population.	Age.	Estimated number of children.	Per cent of the school population.	Per cent of the total population.
From 5 to 6.....	1,694,208	9.01	2.67	From 14 to 15...	1,335,750	7.11	2.10
6 to 7.....	1,715,629	9.13	2.70	15 to 16...	1,165,878	6.20	1.84
7 to 8.....	1,599,007	8.51	2.52	16 to 17....	1,232,380	6.55	1.94
8 to 9.....	1,616,089	8.60	2.55	17 to 18....	1,184,254	6.30	1.86
9 to 10....	1,460,748	7.77	2.30	Total.....	18,799,864	100.00	29.61
10 to 11....	1,600,089	8.51	2.52	From 6 to 10....	6,391,473	.....	10.07
11 to 12....	1,318,546	7.01	2.08	10 to 14....	5,795,921	.....	9.13
12 to 13....	1,538,510	8.18	2.42	14 to 18....	4,918,262	.....	7.74
13 to 14....	1,338,776	7.12	2.11				

This table has the defect of the original census table (of 1880) upon which it is based. The tendency of parents or other persons who give information to census enumerators is, through ignorance or negligence, to give children's ages roughly or by guesswork, in even numbers rather than odd, and especially in round numbers. Hence we find more children of 6 years of age than either 5 or 7, and so with 8, 10, 12; etc., the number of 10 years of age being particularly large.¹

The summaries of the number of children from 6 to 10, 10 to 14, and 14 to 18 years, in the foregoing table, give approximately the number of children of age suitable for primary, grammar, and secondary instruction, respectively.

¹ This defect is so magnified in the ages of older people in the census of 1880, that 188,752 are given as 59 years old, 427,937 as 60, and 148,731 as 61.

TABLE 2.—School enrollment and its relation to the number of children 5 to 18 years of age.

1870-71 TO 1890-91.

State or Territory.	Whole number of children enrolled on the school registers, excluding duplicates.				Gain or loss the last year reported.	Number of pupils enrolled for every 100 children 5 to 18 years of age.				
	1870-71.	1879-80.	1889-90.	1890-91.		1870-71.	1879-80.	1889-90.	1890-91.	
1	2	3	4	5	6	7	8	9	10	11
UNITED STATES.....	7,561,582	9,807,505	12,722,581	12,968,061	I.... <i>a</i> 342,994	<i>Per cent.</i> I.... 2.72	61.45	65.50	68.61	68.95
North Atlantic Division.....	2,743,344	2,930,345	3,112,622	3,138,064	I.... <i>a</i> 32,073	I.... 1.03	77.95	75.17	70.44	70.00
South Atlantic Division.....	603,619	1,242,811	1,785,486	1,815,724	I.... <i>a</i> 68,480	I.... 3.92	30.51	50.74	59.22	59.47
South Central Division.....	767,839	1,371,975	2,293,579	2,409,153	I.... <i>a</i> 148,625	I.... 6.57	34.17	46.43	60.14	62.44
North Central Division.....	3,300,660	4,033,828	5,015,217	5,047,983	I.... <i>a</i> 39,560	I.... .79	76.87	75.84	76.46	76.05
Western Division.....	146,120	288,546	515,677	556,937	I.... <i>a</i> 54,256	I.... 10.81	54.77	64.96	70.01	72.33
North Atlantic Division:										
Maine.....	6152,600	149,827	130,676	141,433	I.... 1,757	I.... 1.26	87.35	89.80	85.88	87.12
New Hampshire.....	71,957	64,341	59,813	60,195	I.... 382	I.... .64	91.31	81.32	71.28	71.15
Vermont.....	665,384	75,238	e65,608	b 664,280	I.... 1,328	I.... 2.02	87.21	87.21	.....	.....
Massachusetts.....	573,661	306,777	371,492	376,986	I.... 5,494	I.... 1.48	72.34	71.76	72.56	72.46
Rhode Island.....	634,000	40,604	52,774	51,482	I.... 1,292	I.... 2.45	59.59	62.66	60.30	60.30
Connecticut.....	113,588	119,694	126,505	128,905	I.... 2,400	I.... 1.90	80.83	76.97	72.03	72.33
New York.....	1,028,110	1,031,593	1,042,160	1,054,044	I.... 11,884	I.... 1.14	82.98	77.10	70.71	70.43
New Jersey.....	169,430	204,961	234,072	f234,072	I.... 6,631	I.... 2.92	63.20	64.77	62.21	f62.21
Pennsylvania.....	824,614	937,310	1,020,522	1,026,667	I.... 6,145	I.... .60	76.35	74.37	69.53	68.52
South Atlantic Division:										
Delaware.....	20,058	27,823	31,434	f31,434	I.... g550	I.... 1.75	50.04	65.20	66.19	f66.19
Maryland.....	115,682	162,431	184,251	189,214	I.... 4,963	I.... 2.69	46.70	58.13	64.37	61.33
District of Columbia.....	15,157	26,430	36,906	38,386	I.... 1,480	I.... 4.01	41.60	55.40	63.10	61.97
Virginia.....	131,088	220,736	342,269	342,720	I.... 451	I.... .13	32.34	45.00	69.51	59.80
West Virginia.....	76,939	142,850	193,064	195,376	I.... 5,312	I.... 2.75	49.47	69.21	75.27	75.71
North Carolina.....	6115,000	252,612	322,533	330,719	I.... 8,186	I.... 2.54	31.23	55.87	59.39	57.12
South Carolina.....	66,056	134,072	201,260	209,559	I.... 8,299	I.... 4.12	27.28	40.55	47.08	46.31
Georgia.....	49,578	236,533	381,298	4381,207	I.... 38,801	I.... 11.33	11.89	46.24	58.46	h58.46
Florida.....	14,000	39,315	92,472	94,019	I.... 1,547	I.... 1.67	21.21	44.46	71.10	69.65

a A aggregate increase for one year, not the increase over 1889-90, which will

not be known until the reports for 1890-91 are all in.

b Estimated.

c Number of pupils attending two weeks or more.

d Includes only pupils of legal school age (5 to 20).

e Includes only pupils of legal school age (5 to 18).

f In 1889-90.

g Average yearly decrease for two years.

h In 1890.

ENROLLMENT.

Whole number of pupils (enrollment).—As will be seen by the foregoing table (column 5), there were in 1890-91 (or according to the latest information obtainable) 12,966,061 different pupils enrolled in the common schools of the United States; a gain in one year of 342,994, or 2.72 per cent.¹

This enrollment was 20.41 per cent of the population, as against 17.82 per cent in 1870, 19.67 per cent in 1880, and 20.27 per cent in 1890.

The public school enrollment, therefore, has continued without intermission since 1870 to gain upon the population.

The proper test of school attendance.—It has been shown in previous reports, however, that the public school enrollment in certain of the Northern States has not increased as rapidly as the population, but attention was called to the circumstance that the enrollment might nevertheless have increased as fast as the school population, which is obviously the proper quantity to make comparison with, since the ratio of the school population to the total population is continually shifting, and it is from the school population alone that the public school pupils are drawn. What proportion of the children of school age attend school is manifestly the proper test of the extent of school attendance, not what proportion of children, infants, and adults; the two latter classes not supplying any school attendants at all. This becomes more apparent when it is borne in mind that the proportion of adults to children of school age is five times as great in some States as in others (see Table 9, column 8), thus vitiating all inter-State comparisons of enrollment based upon total population by introducing an irrelevant factor of uncertain effect.

This may be illustrated by a somewhat analogous example from another field of statistical inquiry: If it is desired to ascertain the number of bushels of wheat raised per acre in a given State, the total product of wheat in bushels is divided by the number of acres planted to wheat, not by the total acreage of the State. The proportion of land not planted to wheat is very different in different States.

Proportion of school population enrolled.—The proportion of the school population, then, enrolled in the public schools at various epochs is given in columns 8, 9, 10, and 11 of the preceding table. The age basis (5-18) is uniform for all the States.

From this it will be seen that in most of the Northern States east of the Mississippi River the proportion of the children of school age enrolled in the schools has decreased since 1870. This decrease is especially notable in New Hampshire, and is large in Connecticut, New York, Pennsylvania, Ohio, and Illinois. There has also been a considerable decrease in Michigan and Illinois, and a slight decrease in Maine, New Jersey, and Minnesota.

¹ The smallness of the gain in the North Central division (0.79 per cent) is due principally to imperfect reports from Ohio and Indiana.

The only States in the group in question that show an increase since 1870 are Massachusetts, Rhode Island, and Indiana, and in these the increase is slight.

In the Southern States the proportion of the school population who are enrolled in school is considerably less than in the Northern (columns 8-11).¹ The division which shows best in this respect is the North Central, which has more than 76 per cent of its population 5 to 18 years of age enrolled in school.

Kansas has the largest percentage of its school population enrolled in school (87.66), then comes Maine (87.12), Iowa (86.33), and South Dakota (81.04).

The two States, viz, Massachusetts and Connecticut, which have perhaps made the most persistent and systematic efforts to enforce compulsory attendance, and in which the conditions regarding density of population seem especially to favor such efforts, report only about 72 per cent of their population 5 to 18 enrolled. This rises only slightly above the average for the United States (about 69), and is less than that of Tennessee (78.29), or West Virginia (75.71).

At the other end of the line come Louisiana, with only about one-third (33.73 per cent), and South Carolina, with less than one-half (48.31 per cent), of their population 5 to 18 years enrolled in school.

Why the enrollment has fallen off in New York.—State Superintendent Draper, of New York, in attempting to account for the falling off in the proportion of the school population enrolled in school in that State said in his last report:

The most ready suggestion which will be offered in explanation is the organization of church or parochial schools. This explanation seems inadequate. It will undoubtedly explain somewhat, but not fully. I am, of course, familiar with the extent to which the great Roman Catholic Church and some other denominations of Christians have felt impelled to organize schools under their own auspices. But it can hardly be said that the growth of these church schools has been sufficiently regular and uniform for forty years to account for the uniform falling off in the attendance upon the public schools during that time. Moreover, it must be said that non-denominational private schools were much more common and much more generally attended in former years than now. While, therefore, it is undoubtedly true that the organization of church schools will account in some degree for the comparative falling off in the attendance upon the public schools, still it is but a partial explanation of the fact.

Another partial explanation may be found in the fact that records are more completely and correctly kept and statistics are more accurate than formerly. It is within the knowledge of all connected with the schools that very special attention has been given this subject in recent years, with a view to more extended and reliable information upon which to base educational action. Figures are the result of investigation rather than of estimates much more generally than in former years, and the fact may place the later years in an apparent disadvantage when compared with the earlier ones. This, however, is no adequate explanation of the unfortunate fact to which the attention of the State is called.

¹The proportion of the *total* population enrolled in the schools is generally greater in the Southern States than in the Northern; but this proportion has been shown to be, and is, misleading.

There is no full explanation. The fact can not be explained away. The statement that the attendance upon the public schools does not keep pace with the growth in population is true. It may be said with equal truth that the attendance upon public and private schools combined is not as great relatively as it was in former years.

The reasons why this is so will appear to all who will inquire.

As cities increase in population, the indifferent, unfortunate, dissolute, vicious, and criminal classes increase, not normally and naturally, but out of proportion to the increase in population. One thousand persons living in the country will not have in their number as many persons who must be cared for, directed, and regulated in the interest of the common safety as 1,000 persons living in a crowded city. This fact has vital relations to attendance upon the schools. Yet we have done little or nothing in the way of providing against it.

Again, there has been much legislation in recent years for the purpose of preventing the employment of children in factories and elsewhere. What is of more consequence, the State has provided the machinery for vigorously enforcing this legislation. Public officers, in the pay of the State, have traversed its territory through all its length and breadth, driving children out of employment. The employers of labor have been required to report the names and ages of their employes, and have been threatened with severe penalties for employing children below 13 years of age. I agree with the wisdom of this policy, providing measures equally vigorous are taken for making these children go to school. If children are not to go to school they had better be at work. But while we have been driving children out of the shops, we have done nothing to compel them to go to school.

TABLE 3.—Average attendance and its relation to enrollment.

1870-71 TO 1890-91.

	Average number of pupils daily attending school.				Gain or loss the last year reported.		Average number of pupils attending daily for each 100 enrolled during the year.
State or Territory.	1870-71.	1879-80.	1889-90.	1890-91.	Absolute increase or decrease.	Per cent of increase or decrease.	
1	2	3	4	5	6	7	8
UNITED STATES.....	4,545,317	6,144,143	8,153,635	8,329,234	I....201,240	<i>Per cent.</i> I... 2.48	64.2
North Atlantic Division.....	1,627,208	1,824,487	2,036,459	2,071,680	I.... 29,235	I... 1.43	66.0
South Atlantic Division.....	368,111	776,798	1,126,683	1,125,514	I.... 8,388	I... 0.75	62.0
South Central Division.....	535,632	902,767	1,467,649	1,522,908	I.... 66,719	I... 4.58	63.2
North Central Division.....	1,911,720	2,451,167	3,188,732	3,256,065	I.... 70,726	I... 2.22	64.5
Western Division.....	102,646	188,924	334,112	353,067	I.... 26,172	I... 8.01	63.5
North Atlantic Division:							
Maine.....	100,392	103,115	98,364	103,062	I.... 4,698	I... 4.78	72.9
New Hampshire.....	48,150	48,966	41,526	42,096	I.... 570	I... 1.37	69.9
Vermont.....	a44,100	48,006	45,887	a45,475	D... a412	D... .90	a70.7
Massachusetts.....	201,750	233,127	273,910	278,002	I.... 4,692	I... 1.71	73.9
Rhode Island.....	22,485	27,217	33,905	34,901	I.... 996	I... 2.94	67.8
Connecticut.....	62,683	73,546	83,656	84,304	I.... 648	I... .77	65.4
New York.....	493,618	573,089	642,984	650,017	I.... 7,033	I... 1.09	61.7
New Jersey.....	86,812	115,194	133,286	b133,286	D... 5,986	D... 4.30	b57.0
Pennsylvania.....	567,188	601,627	682,941	699,937	I.... 16,996	I... 2.49	68.2
South Atlantic Division:							
Delaware.....	a12,700	17,439	19,649	b19,649	D... a850	D... 4.15	b62.5
Maryland.....	56,435	85,778	102,351	106,170	I.... 3,819	I... 3.73	56.1
Dist. of Columbia.....	10,261	20,637	28,184	29,010	I.... 826	I... 2.93	75.6
Virginia.....	77,402	128,404	198,290	193,536	D... 4,754	D... 2.40	56.5
West Virginia.....	51,336	91,604	121,700	123,987	I.... 2,287	I... 1.88	62.5
North Carolina.....	a73,000	170,100	203,100	201,763	D... 1,337	D... 0.66	61.0
South Carolina.....	a44,700	a90,600	147,799	148,603	I.... 804	I... .54	70.9
Georgia.....	31,377	145,190	240,791	c240,791	I.... 10,407	I... 4.52	c63.2
Florida.....	a10,900	27,046	64,819	62,005	D... 2,814	D... 4.34	66.0
South Central Division:							
Kentucky.....	120,866	178,000	225,739	245,409	I.... 19,670	I... 8.71	57.5
Tennessee.....	a89,000	208,528	323,548	337,818	I.... 14,270	I... 4.41	69.9
Alabama.....	107,666	117,978	182,467	b182,467	I.... 10,366	I... 6.02	b60.5
Mississippi.....	90,000	156,761	207,704	197,580	D... 10,124	D... 4.88	60.3
Louisiana.....	a40,500	a54,800	87,536	91,820	I.... 4,284	I... 4.89	70.2
Texas.....	a41,000	a132,000	d291,941	d319,100	I.... 27,159	I... 9.30	61.8
Arkansas.....	a46,600	a51,700	a148,714	ab148,714	I.... a1,094	I... a.74	ab66.7
North Central Division:							
Ohio.....	432,452	476,279	549,269	560,293	I.... 11,024	I... 2.01	74.2
Indiana.....	295,071	321,659	342,275	c342,275	D... 8,477	D... 2.42	b66.7
Illinois.....	341,686	431,638	538,310	532,634	D... 5,676	D... 1.05	66.7
Michigan.....	a193,000	a240,000	a282,000	298,400	I.... 16,400	I... 5.81	66.7
Wisconsin.....	a132,000	a156,000	200,457	a204,600	I.... a4,343	I... a2.17	a57.0
Minnesota.....	50,694	a78,400	127,025	127,025	I.... 3,686	I... 2.99	b45.2
Iowa.....	211,562	259,836	306,309	317,267	I.... 10,958	I... 3.58	63.0
Missouri.....	187,024	a281,000	384,627	412,133	I.... 27,500	I... 7.15	64.4
North Dakota.....	{ a1,040	8,530 {	20,694	d20,694	I.... 1,857	I... 9.86	b58.2
South Dakota.....	{	48,327 {	b48,327	I.... a6,127	I... a14.52	b61.9	
Nebraska.....	a14,300	60,156	146,139	146,315	I.... 176	I... 0.12	59.1
Kansas.....	52,891	137,069	243,300	246,102	I.... 2,802	I... 1.15	63.2
Western Division:							
Montana.....	a1,100	a3,000	10,596	12,093	I.... 1,497	I... 14.13	63.5
Wyoming.....	a250	1,920	a4,700	a5,800	I.... a1,100	I... a23.41	a66.5
Colorado.....	2,611	12,618	38,715	a38,715	I.... 3,661	I... 10.44	b59.1
New Mexico.....	a880	3,150	a13,000	14,435	I.... a1,435	I... a11.04	63.9
Arizona.....		2,847	4,702	b4,702	I.... 409	I... 9.53	b58.9
Utah.....	12,819	17,178	20,967	26,357	I.... 5,390	I... 25.71	56.3
Nevada.....	a1,800	5,401	5,064	b5,064	D... 539	D... 9.62	b68.6
Idaho.....	a600	3,863	a9,500	ab9,500	I.... a830	I... a9.57	ab66.4
Washington.....	a3,300	10,546	36,946	44,411	I.... 7,445	I... 20.20	63.8
Oregon.....	a15,000	27,435	43,333	45,401	I.... 2,068	I... 4.73	62.8
California.....	64,286	100,966	146,589	b146,589	I.... 2,856	I... 1.99	b66.1

a Estimated.

b In 1889-90.

c In 1890.

d Average attendance of pupils above and below the scholastic age estimated.

TABLE 4.—Aggregate number of days' schooling given; the same compared with the population 5 to 18 and with the enrollment. Length of school term.

State or Territory.	Aggregate number of days' schooling given.	Average number of days' schooling given for every child 5 to 18 years of age.	Average number of days attended by each pupil enrolled.	Average length of school term.					Increase or decrease the last year reported.
				1870-71	1879-80	1889-90	1890-91		
1	2	3	4	5	6	7	8	9	
		Days.	Days.	Days.	Days.	Days.	Days.	Days.	
UNITED STATES	1, 129, 955, 876	60.1	87.1	132.1	130.3	134.7	135.7	I. 1.0	
North Atlantic Division.....	348, 164, 297	77.7	111.0	152.0	159.0	166.6	168.0	I. 1.4	
South Atlantic Division	112, 439, 462	36.8	61.9	97.4	92.4	99.9	99.9	I. 0	
South Central Division	144, 583, 522	37.5	60.0	91.6	79.2	88.2	95.0	I. 6.8	
North Central Division.....	477, 526, 057	72.0	94.6	133.9	139.8	148.0	146.7	D 1.3	
Western Division	47, 212, 538	61.5	85.0	119.2	129.2	135.0	133.8	D 1.2	
North Atlantic Division:									
Maine.....	10, 821, 510	66.7	76.5	98	109	112	105	D 7	
New Hampshire.....	4, 996, 795	59.1	83.0	70	105.3	117.7	118.7	I. 1	
Vermont.....	6, 230, 000	76.7	96.9	115.6	125.5	136	a137	I. 1	
Massachusetts.....	47, 083, 738	90.5	124.9	169	177	177	169	D 8	
Rhode Island.....	6, 561, 388	76.9	127.4	170	184	188	188	0	
Connecticut.....	15, 365, 247	86.2	119.2	172.4	179	182.5	182.26	D .24	
New York.....	122, 884, 485	82.1	110.6	176	178.5	186.5	185.5	D 1	
New Jersey.....	b25, 590, 912	b68.0	b109.3	178	192	192	b192		
Pennsylvania.....	108, 630, 222	72.5	105.8	127.2	133.4	147.6	155.2	I. 7.6	
South Atlantic Division:									
Delaware.....	b3, 261, 734	b68.7	b103.7	132	158	166	b166		
Maryland.....	19, 535, 280	63.3	103.3	183	187	184	184	0	
District of Columbia.....	5, 192, 790	83.8	135.4	200	193	178	179	I. 1	
Virginia.....	22, 450, 176	39.2	65.5	93.2	112.8	118.2	116	D 2.2	
West Virginia.....	11, 902, 752	45.4	60.0	76.8	90	97	96	D 1	
North Carolina.....	12, 166, 309	21.0	36.0	a50	50	59.2	60.3	I. 1.1	
South Carolina.....	10, 431, 931	24.0	49.8	a100	70	69.6	70.2	I. .6	
Georgia.....	c20, 057, 890	c30.7	c52.6	59	a65	83.3	c83.3		
Florida.....	a7, 440, 600	a55.1	a79.1			a120	b120		
South Central Division:									
Kentucky.....	24, 540, 900	39.7	57.5	a110	102	94	100	I. 6	
Tennessee.....	32, 430, 528	52.5	67.1	a77	68	86	96	I. 10	
Alabama.....	b13, 405, 900	b24.8	b44.4	66.5	81.3	73.5	b73.5		
Mississippi.....	16, 794, 390	35.0	51.2	110	74.5	a86	85	D a1	
Louisiana.....	9, 242, 744	23.9	70.7	a65	78.8	100.6	100.7	I. .1	
Texas.....	37, 015, 600	36.3	57.1	a140	71.7	100	116	I. 16	
Arkansas.....	b11, 153, 550	b27.7	b50.0			a75	ab75		
North Central Division:									
Ohio.....	89, 590, 000	85.4	118.7	165	152	166.5	159.9	D 6.6	
Indiana.....	b44, 495, 750	b68.7	b86.7	98.5	136	130	b130		
Illinois.....	80, 819, 232	79.2	108.6	146.7	150	155	b155	I. 0	
Michigan.....	45, 952, 060	77.6	103.0	140	150	156	154	D 2	
Wisconsin.....	b31, 792, 470	b63.1	b90.4	155	165	158.6	b158.6		
Minnesota.....	b16, 259, 200	b43.2	b57.9	a83	94	128	b128		
Iowa.....	49, 493, 652	84.8	98.2	130	148	156	156	0	
Missouri.....	52, 062, 046	61.2	81.4	90	a104	129.4	126.4	D 3	
North Dakota.....	b2, 338, 442	b46.9	b65.8			113	b113		
South Dakota.....	b7, 007, 415	b72.8	b89.8	a75	a96	145	b145		
Nebraska.....	20, 337, 785	61.0	82.2	72	82	140	139	D 1	
Kansas.....	31, 378, 005	70.6	80.5	116	120	135	127.5	D 7.5	
Western Division:									
Montana.....	1, 891, 645	70.2	99.3	a89	96	142.7	156.4	I. 13.7	
Wyoming.....	a696, 000	a48.3	a79.7	a200	119	a120	ab120		
Colorado.....	b5, 590, 446	b61.6	b85.4	92	a132	144.4	b144.4		
New Mexico.....	1, 010, 450	22.9	44.7	a111	111	a67	70	I. a3	
Arizona.....	b592, 452	b39.1	b74.2	0	109	126	b126		
Utah.....	3, 426, 410	47.8	73.2	152	128	133	130	D 3	
Nevada.....	b708, 960	b70.8	b96.0	142	143	140	b140		
Idaho.....	b663, 000	b29.0	b46.3	a45	94	a69.8	b69.8		
Washington.....	4, 512, 158	47.2	64.8	a80	a91	97.2	101.6	I. 4	
Oregon.....	5, 048, 591	55.8	69.8	a90	90	118.2	118.2	D 7.6	
California.....	b23, 102, 426	b80.6	b104.2	123	146.6	157.6	b157.6		

a Estimated.

b In 1889-90.

c In 1890.

NUMBER OF DAYS ATTENDED.

(Table 4.)

The total number of days attended by all pupils was 1,129,955,876, which gives an average of 60.1 days for each person 5 to 18 years of age.

If this were a constant quantity, so that each child received on an average 60.1 days' common school instruction annually while passing from his fifth to his eighteenth year, he would get all together 781.3 days of schooling. This is equivalent to about four years (3.9) of 200 days each, and is a time measure of the amount of instruction the public schools furnish each person of the population at the present rate.

The average amount of schooling given for each person 5 to 18 years of age varied the past year (column 3) from 21 days in North Carolina and 22.9 in New Mexico to 90.5 in Massachusetts. In the North generally, it is about double what it is in the South, owing in part to a longer school term and in part to the larger percentage of the school population attending school.

Of the pupils actually enrolled, each one attended on an average 87.1 days (column 4).

The average length of time the schools were in session (column 8) was 135.7 days, an increase of one day over the preceding year, and of 5.4 days over 1879-80.

Some notable cases of change in the length of the school term are recorded in the table. The loss of seven days in Maine is due to the diversion of funds to the improvement of schoolhouses and higher salaries for male teachers. Massachusetts shows a reduction of eight days; this "does not arise," says State Superintendent Dickinson, "from any want of appreciation of the work of the schools, or from any unwillingness to give them liberal support, but rather from the feeling that from thirty to thirty-six weeks per year is all the time that can be profitably spent in school. And what contributes to this feeling is the desire of many families to spend a longer time at the summer resorts. To provide for such families, and to avoid the demoralizing effects of having a part of the school withdrawn, the summer vacation is in many instances prolonged at both ends. The long vacations, together with the frequent holidays during the year, seem already to have encroached upon the school time to an undesirable extent."

The school term of Pennsylvania shows an increase of 7.6 days, the result in part of increasing the State appropriation from \$1,500,000 to \$2,000,000. The effect of the "great appropriation" of \$5,000,000 in 1891 does not yet appear in the statistics.

Kentucky, Tennessee, and Texas all largely increased their school term in 1890-91, the latter by sixteen days. On the other hand, Ohio, Kansas, and Oregon show a considerable decrease.

Observations on ascertaining the average length of school term.—The aggregate number of days' attendance given in the above table, when not reported direct by State

superintendents, has been obtained by multiplying the average daily attendance of pupils by the average length of school term in days. Either of these three quantities is thus made a most simple function of the other two, and can be readily obtained when the other two are given. Though this relation between these three quantities does not rigidly subsist in the statistical systems of many of the States, owing to diverse methods of computing average attendance and average length of school term, yet the assumption that it does is correct in principle and gives more accurate results in practice than any other.

A practical application is made of this principle in finding the average length of school term of a number of States, as recorded in the summaries of column 8, where the aggregate attendance in days in each division and in the United States, is divided by the corresponding average daily attendance to get the average length of school term in days of each group of States.

By this method the school term of each State in taking the average is in fact given a weight proportioned to the school attendance of the State, as should be done under a correct interpretation of the expression "average length of school term." The result might more properly be called "average length of attendance," which is essentially what it is desired to know.

A method in use in some States for finding the average school term of a county, for instance, is to weight the different school terms of the towns or districts the county is composed of by the number of schools in each; in other words, the total number of days (or months) all the schools of a county were kept is divided by the total number of schools, to get the average time each one was kept. So in finding the average term for the State, the school is taken as the unit instead of the pupil, as in the Bureau's method. When the schools differ much in size (number of pupils), as they do in all mixed urban and rural systems, varying from some half dozen to five hundred or more pupils each, the average term obtained by this method varies considerably from that obtained by the foregoing. The long terms of the large city schools not being given their proper weight, the resulting average is too small. The same objection applies still more forcibly to weighting the school terms of the different counties or towns by the number of school districts in each.

Still another method is to add together the school terms of the different counties or towns, and divide by the number of such counties or towns; i.e., the simple arithmetical mean is taken. Smithville, for instance, with its 100 pupils, counts for as much in forming the average as the metropolis, with its 100,000. Smithville, 60 days; metropolis, 180 days; average term of the two, 120 days. This method, if it can be so called, gives altogether too short an average term, and nothing can be said in defense of it. It is as if, wishing to get the population per square mile of Minnesota and Dakota combined, we said, Minnesota, 9.86; Dakota, 0.92; average number of persons per square mile in the combined territory $(0.92+9.86)\div2=5.39$, instead of dividing the total population of the two States together by the combined area in square miles.

The "aggregate number of days attendance" is a statistical item of the utmost simplicity and of great value, about the meaning of which there can be little or no difference of opinion. Every teacher's register that records the number of pupils present each day in any school, as they all presumably do, contains the data for ascertaining it for that school for the school year by the simple process of addition, or summing up.

TABLE 5.—*Teachers.*

State or Territory.	Whole number of teachers, 1890-91.			Per cent of male teachers.			
	Males.	Females.	Total.	1870-71.	1879-80.	1889-90.	1890-91.
1	2	3	4	5	6	7	8
UNITED STATES.....	124,449	244,342	368,791	<i>Per cent.</i> 41.0	<i>Per cent.</i> 42.8	<i>Per cent.</i> 34.5	<i>Per cent.</i> 33.7
North Atlantic Division.....	18,099	74,290	92,389	26.2	28.8	20.0	19.6
South Atlantic Division.....	18,854	20,875	39,729	63.8	62.5	49.1	47.5
South Central Division.....	28,190	22,213	50,403	67.5	67.2	57.6	55.9
North Central Division.....	54,490	116,093	170,583	43.2	41.7	32.4	31.9
Western Division.....	4,816	10,871	15,687	45.1	40.3	31.1	30.7
North Atlantic Division:							
Maine.....	a1,169	a6,145	7,314	a24.4	a27.2	a16.0	a16.0
New Hampshire.....	305	2,829	3,134	15.0	19.8	9.8	9.7
Vermont.....	a 533	a3,842	a4,375	16.5	16.8	12.0	a12.2
Massachusetts.....	1,016	9,630	10,646	12.7	13.2	9.8	9.5
Rhode Island.....	175	1,280	1,455	a20.4	20.2	12.6	12.0
Connecticut.....	ab549	ab3,544	ab4,093	a22.1	a22.8	a13.4	ab13.4
New York.....	5,359	26,623	31,982	22.9	26.0	16.9	16.8
New Jersey.....	b822	b3,643	b4,465	32.5	28.5	18.4	b18.4
Pennsylvania.....	8,171	16,754	24,925	42.8	45.5	34.2	32.8
South Atlantic Division:							
Delaware.....	ab217	ab484	b701	a29.9	a46.6	a31.0	ab31.0
Maryland.....	1,055	2,912	3,967	45.0	42.6	27.8	26.6
District of Columbia.....	103	692	795	a8.2	87.	13.0	13.0
Virginia.....	3,025	4,693	7,718	64.5	61.8	41.5	39.2
West Virginia.....	3,461	2,139	5,600	79.0	75.2	63.4	61.8
North Carolina.....	3,708	2,827	6,535	a73.2	a71.3	59.1	56.8
South Carolina.....	2,011	2,252	4,263	62.4	59.5	49.6	47.2
Georgia.....	c4,004	c3,505	c7,509	71.4	a65.2	53.3	c53.3
Florida.....	a1,270	a1,371	2,641	a65.7	61.6	48.0	a48.1
South Central Division:							
Kentucky.....	4,481	4,680	9,161	a66.0	64.6	49.8	48.9
Tennessee.....	5,074	3,176	8,250	a75.0	74.4	61.8	61.5
Alabama.....	b3,976	b2,342	b6,318	66.8	63.8	62.9	b62.9
Mississippi.....	3,519	4,027	7,546	a60.8	61.2	49.6	46.6
Louisiana.....	1,244	1,759	3,003	50.9	46.1	44.7	41.4
Texas.....	6,459	4,650	11,109	a77.3	a75.0	61.1	58.1
Arkansas.....	b3,437	b1,579	b5,016	a75.6	78.4	68.5	b68.5
North Central Division:							
Ohio.....	10,763	14,798	25,561	43.2	47.8	43.1	42.1
Indiana.....	b6,780	b6,498	b13,278	60.5	57.5	51.1	b51.1
Illinois.....	6,875	17,102	23,977	43.5	39.7	32.5	28.7
Michigan.....	3,488	12,621	16,109	26.3	29.2	22.3	21.6
Wisconsin.....	2,316	10,026	12,342	a28.8	28.9	19.8	18.8
Minnesota.....	2,086	7,152	9,238	33.7	35.9	23.9	22.6
Iowa.....	5,228	21,541	26,769	39.0	33.6	20.6	19.5
Missouri.....	5,986	7,994	13,980	65.3	58.1	44.4	42.8
North Dakota.....	b560	b1,422	b1,982	} a24.7	{ 40.8	{ 28.3	b28.3
South Dakota.....	b1,346	b3,294	b4,640				b29.0
Nebraska.....	2,861	7,694	10,555				27.1
Kansas.....	6,201	5,951	12,152	47.2	45.1	40.8	51.0
Western Division:							
Montana.....	130	550	680	a60.3	38.5	22.9	19.1
Wyoming.....	78	285	363	a28.6	44.3	22.4	21.5
Colorado.....	b622	b1,753	b2,375	48.8	36.4	26.2	b26.2
New Mexico.....	308	179	487	a91.7	78.0	a62.2	63.3
Arizona.....	b 93	b147	b240	-----		38.8	b38.8
Utah.....	378	420	798	55.0	54.5	46.6	47.4
Nevada.....	b 41	b210	b251	32.4	46.7	16.3	b16.3
Idaho.....	ab166	ac331	b497	a64.3	57.4	a33.4	b33.4
Washington.....	a 779	a1,142	1,921	a46.5	37.4	40.6	40.5
Oregon.....	1,059	1,582	2,641	a51.7	48.3	43.3	40.1
California.....	b1,162	b4,272	b5,434	40.0	33.6	21.4	b21.4

a Approximately.

b In 1889-90.

c In 1890.

TABLE 6.—*Teachers' salaries.*

1890-'91.

State or Territory.	Average monthly salaries of teachers.			
	Males.	Increase or decrease since preceding year.	Females.	Increase or decrease since preceding year.
1	2	3	4	5
UNITED STATES*.....	\$44.89	I... \$0.21	\$36.65	I... \$0.42
North Atlantic Division*.....	56.50	I... .21	38.56	I... 1.32
South Atlantic Division*.....	30.16	D... .26	29.62	D... .15
South Central Division*.....	38.63	I... .39	33.56	D... .14
North Central Division*.....	45.07	I... .13	35.24	I... .16
Western Division*.....	61.44	I... 1.57	54.55	I... .91
North Atlantic Division:				
Maine.....	43.10	I... .50	25.26	D... .04
New Hampshire.....	48.99	I... 3.11	25.89	I... .25
Vermont.....	38.36	D... .04	25.52	I... 1.12
Massachusetts.....	118.07	D... 8.56	48.17	I... 3.33
Rhode Island.....	89.54	I... .06	49.11	I... 3.71
Connecticut.....	77.11	I... .87	39.84	I... .50
New York <i>a</i>	67.97		44.83	
New Jersey <i>b</i>	76.02	I... 4.16	43.62	I... .86
Pennsylvania.....	40.59	I... .73	30.90	I... .56
South Atlantic Division:				
Delaware <i>a</i>	36.60		34.08	
Maryland <i>a</i>	49.02	D... .08	39.42	I... .17
District of Columbia <i>b</i>	101.90	D... c.64	63.00	I... c.60
Virginia.....	31.40	D... .29	26.66	I... .05
West Virginia.....				
North Carolina.....	24.00	D... .72	21.43	D... .64
South Carolina <i>b</i>	27.22	I... .61	22.91	D... .59
Georgia.....				
Florida.....				
South Central Division:				
Kentucky.....	37.00	I... 1.03	38.23	I... .78
Tennessee <i>a</i>	33.31	I... .09	23.28	I... .34
Alabama.....				
Mississippi <i>a</i>	30.05	I... 1.05	27.23	D... .54
Louisiana.....	35.03	I... .68	31.61	I... .64
Texas <i>b</i>	49.00	D... .21	39.15	D... 1.44
Arkansas.....				
North Central Division:				
Ohio.....	40.38	D... 1.00	32.62	D... 1.96
Indiana <i>a</i>	44.40	D... .80	40.20	I... 1.00
Illinois.....	55.98	I... 1.35	45.50	I... 1.09
Michigan.....	47.23	I... .47	33.27	I... .52
Wisconsin <i>b</i>	48.54	D... .55	30.75	I... .03
Minnesota <i>b</i>	42.00	I... 1.42	31.09	I... .23
Iowa.....	37.54	I... .45	30.52	I... .31
Missouri <i>a</i>	48.38	I... .97	38.32	I... .76
North Dakota.....	43.31	I... 4.22	34.26	D... 1.05
South Dakota <i>b</i>	49.00	D... 1.00	37.00	D... 1.00
Nebraska.....	43.00	D... c.09	37.92	I... c1.19
Kansas.....	42.00	I... .15	34.47	D... .23
Western Division:				
Montana.....				
Wyoming.....				
Colorado <i>b</i>	61.99	I... .29	50.86	I... .87
New Mexico.....				
Arizona <i>b</i>	82.45	D... 3.55	74.45	D... 1.10
Utah.....	56.05	I... 8.02	37.73	I... 5.38
Nevada <i>b</i>	97.63	D... .43	63.86	D... 1.13
Idaho.....				
Washington.....	52.29	I... .88	42.16	D... 1.15
Oregon <i>b</i>	46.43	I... .12	38.46	I... 1.71
California <i>b</i>	80.70	I... 2.47	66.20	I... 1.07

* These summaries include only the States tabulated in the same columns below.

a Approximately.*b* In 1889-90.*c* Average yearly decrease or increase for two years.

TABLE 7.—*Schoolhouses and school property.*

State or Territory.	Number of schoolhouses.					Value of all public school property, 1891.
	1871.	1880.	1890.	1891.	Increase or decrease the last year.	
1	2	3	4	5	6	7
UNITED STATES	132, 119	178, 222	224, 526	226, 884	I... 3, 856	.....
North Atlantic Division.....	41, 297	43, 070	46, 072	45, 845	D... 206	.....
South Atlantic Division.....	11, 310	24, 554	32, 396	33, 024	I... 774	.....
South Central Division.....	16, 750	28, 465	39, 799	40, 838	I... 1, 300	.....
North Central Division.....	60, 431	77, 315	97, 169	97, 615	I... 1, 138	.....
Western Division.....	2, 331	4, 818	9, 090	9, 562	I... 844	.....
North Atlantic Division:						
Maine.....	3, 917	4, 309	4, 354	4, 209	D... 145	\$3, 670, 385
New Hampshire.....	a2, 180	2, 248	2, 078	2, 075	D... 3	2, 897, 693
Vermont.....	2, 576	2, 597	2, 483	2, 424	D... 59	1, 298, 005
Massachusetts.....	5, 076	5, 570	7, 147	7, 239	I... 92	.....
Rhode Island.....	c423	453	482	491	I... 9	3, 002, 123
Connecticut.....	1, 651	1, 647	1, 643	1, 650	I... 7	6, 655, 055
New York.....	11, 728	11, 899	12, 022	12, 072	I... 50	50, 013, 491
New Jersey.....	1, 476	1, 585	1, 663	d1, 668	I... 21	d8, 629, 793
Pennsylvania.....	12, 270	12, 762	14, 200	14, 022	D... 178	35, 837, 895
South Atlantic Division:						
Delaware.....	b360	b512	452	d452	I... a2	d886, 749
Maryland.....	1, 509	2, 044	b2, 189	b2, 236	I... 47	.....
District of Columbia.....	a36	a59	96	98	I... 2	.....
Virginia.....	d2, 889	a4, 590	6, 408	6, 509	I... 101	2, 379, 745
West Virginia.....	2, 058	3, 557	4, 814	5, 011	I... 197	2, 151, 336
North Carolina.....	a1, 640	3, 996	5, 793	5, 813	I... 20	848, 074
South Carolina.....	1, 478	2, 749	3, 264	3, 510	I... 246	487, 301
Georgia.....	1, 017	5, 916	7, 047	d7, 047	I... 144	.....
Florida.....	331	1, 131	2, 333	2, 348	I... 15	623, 462
South Central Division:						
Kentucky.....	a3, 829	6, 100	7, 217	7, 485	I... 268	3, 815, 866
Tennessee.....	a2, 210	4, 127	6, 241	6, 629	I... 388	2, 742, 359
Alabama.....	3, 321	4, 597	b6, 495	b d8, 495	I... 318	.....
Mississippi.....	e3, 600	e5, 569	b5, 899	b6, 071	I... 172	.....
Louisiana.....	884	1, 404	2, 290	2, 501	I... 211	.....
Texas.....	1, 324	a5, 700	9, 065	9, 065	D... d114	4, 154, 539
Arkansas.....	1, 591	968	2, 592	d2, 592	I... 57	d897, 858
North Central Division:						
Ohio.....	11, 571	12, 143	12, 813	12, 814	I... 1	30, 811, 617
Indiana.....	8, 989	9, 647	9, 907	d9, 907	D... 21	d14, 979, 339
Illinois.....	10, 979	11, 883	12, 252	12, 313	I... 61	27, 833, 249
Michigan.....	5, 303	6, 400	7, 531	7, 616	I... 85	14, 534, 203
Wisconsin.....	4, 953	5, 667	6, 476	d6, 476	I... 220	d10, 958, 608
Minnesota.....	2, 241	3, 693	5, 864	6, 035	I... 171	12, 623, 265
Iowa.....	7, 598	11, 037	12, 997	13, 129	I... 132	13, 589, 478
Missouri.....	6, 387	8, 249	b9, 712	b9, 711	D... 1	11, 680, 578
North Dakota.....	a55	588	1, 483	d1, 483	I... 66	d1, 515, 602
South Dakota.....			3, 153	3, 153	I... 236	2, 685, 284
Nebraska.....	558	2, 701	5, 937	d5, 937	I... 191	9, 959, 608
Kansas.....	1, 820	5, 315	9, 044	9, 041	D... 3	11, 000, 000
Western Division:						
Montana.....	a39	119	355	385	I... 30	1, 100, 570
Wyoming.....	a4	29	a180	223	I... 43	.....
Colorado.....	80	292	1, 190	d1, 190	I... 195	d4, 387, 809
New Mexico.....	a5	46	b d420	b452	I... 22	.....
Arizona.....	.....	84	b219	d219	I... 22	d268, 435
Utah.....	268	383	514	618	I... 104	1, 137, 544
Nevada.....	43	106	151	d151	I... 10	d276, 736
Idaho.....	21	116	315	d315	I... 21	.....
Washington.....	a155	487	1, 126	1, 275	I... 149	3, 165, 842
Oregon.....	a400	934	1, 493	1, 613	I... 114	2, 124, 802
California.....	1, 316	2, 222	3, 121	d3, 121	I... 124	d13, 624, 143

a Estimated.

b Number of "schools."

c Number of districts.

d In 1890.

e Number of teachers.

TABLE 8.—Receipts of school moneys.

State or Territory.	Income from permanent funds and rents.	From taxation.					Total receipts, excluding sale of bonds and balance on hand.			
		1	2	3	4	5		6	7	8	9
UNITED STATES.....										
North Atlantic Division.....	914,654	\$8,296,347	\$27,631,657	8,388,293	I...\$2,393,088	\$100,358,635	I...\$4,227,519	\$127,900,292	\$11,028,643	\$147,915,282
South Atlantic Division.....	365,538			3,950,605	I.... 957,823	37,292,404	D.... 733,250	45,620,697	3,371,037	49,906,388
South Central Division.....	2,162,694			5,421,146	I.... 369,809	4,379,309	I.... 246,501	8,329,914	449,914	9,175,366
North Central Division.....	4,924,222			7,182,250	I.... 391,192	3,211,471	I.... 237,092	8,632,840	922,840	11,717,651
Western Division.....	599,239			2,689,363	I.... 433,161	48,325,267	I....3,594,738	55,507,517	221,620	65,453,359
					I.... 241,103	7,210,184	I.... 882,438	9,899,547	1,163,732	11,062,517
North Atlantic Division:										
Maine.....	487,417			342,123	I.... 7,925	1,049,636	I.... 137,149	1,391,759	.....	1,479,176
New Hampshire.....	14,408			64,357	I.... 5,729	676,118	I.... 10,295	740,475	39,629	794,512
Vermont.....	663,382			.....	.....	594,882	D.... 8,698	594,882	34,937	695,291
Massachusetts.....	158,901			.....	.....	8,391,839	I.... 262,119	8,391,839	3,805	8,554,545
Rhode Island.....	16,580			111,013	I.... 3,648	873,347	I.... 85,609	984,360	56,574	1,057,540
Connecticut.....	241,631			211,013	I.... 3,000	1,527,110	D.... 6,792	1,768,971	75,881	2,009,383
New York.....	275,446			3,698,985	I.... 409,406	12,153,350	D...1 253,765	13,822,765	1,225,846	17,223,627
New Jersey.....	131,983			1,995,200	I.... 56,025	1,174,008	D.... 77,502	3,169,268	.....	3,301,251
Pennsylvania.....	.....			1,994,694	I.... 472,030	10,972,114	I.... 118,395	12,756,808	1,834,365	14,691,173
South Atlantic Division:										
Delaware.....	600,000			66,000	I.... 500	2209,000	I.... 12,000	215,000	.....	275,000
Maryland.....	60,368			612,905	I.... 49,505	1,146,937	I.... 107,474	1,753,842	116,258	1,936,468
District of Columbia.....	.....			450,319	D.... 2,570	450,319	D.... 2,570	900,638	.....	900,638
Virginia.....	58,195			897,631	I.... 72,943	717,800	I.... 12,371	1,585,431	32,463	1,676,689
West Virginia.....	231,000			255,393	D.... 10,486	1,004,501	I.... 53,156	1,256,894	86,369	1,377,263
North Carolina.....	.....			566,023	I.... 7,250	712,396	D.... 3,251	578,419	136,747	715,166
South Carolina.....	.....			466,144	I.... 35,329	58,119	I.... 6,250	524,263	21,500	545,763
Georgia.....	152,046			646,194	I.... 221,454	229,903	I.... 10,493	976,097	56,577	1,041,474
Florida.....	33,929			79,936	D.... 4,107	450,334	I.... 50,578	530,330	.....	564,259
South Central Division:										
Kentucky.....	107,946			1,252,303	I.... 59,431	789,519	I.... 26,380	2,037,822	137,786	2,303,554
Tennessee.....	127,645			83,134	I.... 63,134	279,744	I.... 42,744	4,422,004	155,497	1,705,146
Alabama.....	163,938			465,729	I.... 77,868	290,000	D.... 14,300	755,729	115	899,782
Mississippi.....	83,751			456,108	I.... 19,083	525,963	I.... 49,702	982,071	125,717	1,191,539
Louisiana.....	45,895			392,481	I.... 47,599	399,221	I.... 12,565	611,702	226,980	884,487
Texas.....	1,613,128			1,396,624	I.... 16,254	455,181	I.... 78,024	1,761,815	262,365	3,637,308
Arkansas.....	640,481			495,631	I.... 96,823	545,843	I.... 42,027	1,041,474	13,880	1,095,895

a Approximately.

c State appropriation for colored schools.

e Five per cent of school fund.

g In 1890.

h Includes voluntary subscriptions.

f Some local funds are not reported.

d United States appropriation.

b In 1889-90.

TABLE 8.—Receipts of school moneys—Continued.

State or Territory.	Income from permanent funds and rents.	From taxation.				Total from taxation.	From all other sources.	Total receipts, excluding sale of bonds and balance on hand.
		State taxes.	Increase or decrease the last year.	Local taxes.	Increase or decrease the last year.			
1	2	3	4	5	6	7	8	9
North Central Division:								
Ohio.....	212, 112	1, 881, 014	I... 142, 269	8, 437, 482	I... 238, 643	10, 318, 496	506, 340	11, 036, 948
Indiana <i>a</i>	608, 333	1, 444, 779	I... 14, 405	3, 078, 383	I... 306, 040	4, 523, 162	440, 569	5, 572, 124
Illinois.....	649, 621	1, 056, 937	I... 56, 937	10, 645, 647	I... 1, 817, 527	11, 702, 584	478, 897	12, 831, 102
Michigan.....	305, 147	625, 399	I... 136, 006	4, 152, 372	I... 42, 337	4, 777, 771	482, 855	5, 565, 773
Wisconsin <i>a</i>	6100, 000	625, 341	I... 19, 105	2, 902, 142	I... 194, 854	3, 527, 483	334, 643	4, 022, 136
Minnesota <i>a</i>	337, 245	479, 443	I... 41, 838	2, 848, 522	I... 575, 856	3, 327, 965	857, 561	4, 522, 771
Iowa.....	247, 686	.....	I... 18, 071	6, 072, 637	I... 153, 934	6, 072, 637	894, 140	7, 184, 463
Missouri.....	859, 932	675, 601	I... 71, 019	3, 506, 523	I... 239, 323	4, 182, 124	373, 642	5, 415, 698
North Dakota <i>a</i>	56, 104	71, 019	I... 3, 177	3, 441, 152	I... 15, 417	512, 171	33, 404	1, 179, 679
South Dakota <i>a</i>	6481, 000	6174, 637	I... 7, 707	950, 443	I... 86, 964	1, 125, 135	54, 078	1, 179, 213
Nebraska <i>a</i>	306, 982	6148, 630	I... 7, 707	1, 717, 619	I... 150, 787	1, 868, 649	380, 503	3, 277, 152
Kansas <i>a</i>.....	.....	.....	.....	3, 572, 340	D... 53, 066	3, 572, 340	304, 988	4, 240, 310
Western Division:								
Montana.....	.....	.....	.....	414, 949	I... 55, 233	414, 949	16, 821	431, 770
Wyoming <i>b</i>.....	.....	.....	.....	260, 000	I... 35, 000	260, 000	.....	260, 000
Colorado <i>a</i>	112, 702	.....	.....	1, 480, 947	I... 208, 388	1, 480, 947	571, 749	2, 165, 398
New Mexico.....	.....	.....	.....	104, 542	I... 9, 542	104, 542	26, 724	131, 266
Arizona <i>a</i>.....	.....	1, 783	D... 1, 713	170, 267	I... 24, 458	172, 050	.....	172, 050
Utah.....	(<i>f</i>)	269, 436	I... 133, 960	294, 623	I... 170, 849	564, 059	45, 445	609, 504
Nevada <i>a</i>	51, 938	12, 673	D... 1, 132	119, 354	I... 4, 170	132, 027	.....	184, 496
Idaho <i>a</i>.....	.....	.....	.....	162, 555	I... 5, 561	162, 555	3, 225	165, 780
Washington.....	47, 904	.....	.....	1, 084, 186	I... 415, 400	1, 084, 186	248, 217	1, 380, 307
Oregon.....	164, 695	.....	.....	757, 360	I... 100, 956	757, 360	152, 928	1, 074, 983
California <i>a</i>	6222, 000	2, 405, 471	I... 109, 988	2, 361, 401	D... 147, 119	4, 766, 872	98, 092	5, 086, 964

a In 1889-90.*b* Approximately.*c* Includes proceeds of bond sales.*d* The State funds apportioned to cities are included in col. 5.*e* In 1887-88.*f* Included in "other sources."

TABLE 9.—(1) Amount raised per taxpayer; (2) amount raised for each child of the school population; (3) comparison of the number of taxpayers with that of the school population.

State or Territory.	Amount raised per capita of adult male population, from—					Amount raised for each child of the school population (5 to 18 years).	Number of adult males to each 100 children, 5 to 18 years of age.*
	Permanent funds and rents.	State taxes.	Local taxes.	Other sources.	Total per adult male.		
1	2	3	4	5	6	7	8
UNITED STATES	\$0.48	\$1.61	\$5.84	\$0.68	\$8.61	\$7.87	91.4
North Atlantic Division.....	.17	1.64	7.26	.66	9.73	11.13	114.4
South Atlantic Division.....	.19	1.93	2.14	.22	4.48	3.00	66.8
South Central Division.....	.85	2.14	1.27	.36	4.62	3.04	65.9
North Central Division.....	.67	1.14	7.72	.91	10.42	9.86	94.6
Western Division.....	.50	2.23	5.97	.96	9.66	15.17	156.7
North Atlantic Division:							
Maine.....	.44	1.70	5.22	.....	7.36	9.11	123.7
New Hampshire.....	.12	.54	5.68	.33	6.67	9.39	140.8
Vermont.....	a. 65	.....	5.91	.35	6.91	8.56	124.1
Massachusetts.....	.24	.....	12.42	.01	12.67	16.44	129.9
Rhode Island.....	.16	1.09	8.23	.56	10.44	12.39	118.7
Connecticut.....	.72	1.06	6.72	.34	8.84	11.27	127.6
New York.....	.15	2.04	6.76	.69	9.64	11.58	120.1
New Jersey b.....	.32	4.83	2.84	.....	7.99	8.77	109.9
Pennsylvania.....	.....	1.32	7.23	1.30	9.85	9.81	99.6
South Atlantic Division:							
Delaware ab.....	1.26	d. 13	4.39	.....	5.78	5.79	100.1
Maryland.....	.22	2.24	4.19	.42	7.07	6.28	88.9
District of Columbia.....	.....	e 6.59	6.59	.....	13.18	14.54	110.3
Virginia.....	.15	2.26	1.87	.08	4.36	2.92	67.0
West Virginia.....	a. 17	1.38	5.42	.47	7.44	5.26	70.7
North Carolina.....	.....	1.63	f. 04	.39	2.06	1.24	59.9
South Carolina.....	.....	1.95	.24	.09	2.28	1.26	55.1
Georgia c.....	.38	1.62	.83	.14	2.97	1.82	61.0
Florida.....	.34	.80	4.51	.....	5.65	4.18	74.0
South Central Division:							
Kentucky.....	.24	2.74	g 1.76	.30	5.04	3.73	74.0
Tennessee.....	.31	2.78	.68	.38	4.15	2.76	66.5
Alabama b.....	.44	1.43	a. 89	.01	2.77	1.67	60.1
Mississippi.....	.30	1.66	1.91	.46	4.33	2.49	57.3
Louisiana.....	.18	1.19	1.21	.89	3.47	2.28	65.8
Texas.....	2.91	2.35	.82	.47	6.55	4.48	68.3
Arkansas b.....	a. 16	1.92	2.12	.05	4.25	2.72	64.0
North Central Division:							
Ohio.....	.21	1.84	8.25	.49	10.79	10.52	97.6
Indiana b.....	1.02	2.43	5.17	.74	9.36	8.60	91.9
Illinois.....	.60	.97	9.79	.44	11.80	11.70	99.2
Michigan.....	.49	.99	6.60	.77	8.85	9.40	106.2
Wisconsin b.....	a. 35	1.35	6.28	.72	8.70	7.98	91.6
Minnesota b.....	.90	1.27	7.58	2.28	12.03	12.01	99.8
Iowa.....	.47	.....	11.54	h 1.64	13.65	12.31	90.2
Missouri.....	1.19	.94	4.87	.52	7.52	6.36	84.7
North Dakota b.....	1.00	1.27	7.88	.60	10.75	12.06	112.2
South Dakota b.....	.....	1.81	9.82	.56	12.19	12.24	100.5
Nebraska b.....	a 1.60	i. 49	5.70	3.09	10.88	10.28	94.5
Kansas b.....	.80	.....	9.32	.95	11.07	9.41	85.0
Western Division:							
Montana.....	.....	.....	5.62	.23	5.85	16.02	274.0
Wyoming a.....	.....	.....	8.64	.....	8.64	18.04	208.8
Colorado b.....	.68	.....	8.98	3.47	13.13	23.87	181.8
New Mexico.....	.....	.....	2.27	.58	2.85	2.97	104.3
Arizona b.....	.....	.08	7.18	.....	7.26	11.35	156.4
Utah.....	(j)	4.65	5.09	.78	10.52	8.50	80.7
Nevada b.....	2.48	.60	5.70	.03	8.81	18.43	209.3
Idaho b.....	.....	.....	5.16	.10	5.26	7.26	137.9
Washington.....	.27	.....	6.12	1.40	7.79	14.44	185.3
Oregon.....	1.38	.....	6.33	1.28	8.99	11.87	132.1
California b.....	a. 48	5.20	5.11	.21	11.00	17.75	161.3

* United States Census of 1890.

a Approximately.

b In 1889-90.

c In 1890.

d State appropriation for colored schools.

e United States appropriation.

f Some local funds are not reported.

g Including voluntary contributions.

h Including proceeds of bond sales.

i In 1887-88.

j Included in "other sources."

TABLE 10.—Percentage classification of school receipts.

State or Territory.	Percentage (of the total receipts) derived from—			
	Permanent funds and rents.	State taxes.	Local taxes.	Other sources.
1	2	3	4	5
	Per cent.	Per cent.	Per cent.	Per cent.
UNITED STATES.....	5.6	18.7	67.8	7.9
North Atlantic Division.....	1.8	16.8	74.6	6.8
South Atlantic Division.....	4.3	43.1	47.7	4.9
South Central Division.....	18.5	46.3	27.4	7.8
North Central Division.....	6.5	11.0	73.8	8.7
Western Division.....	5.1	23.1	61.8	10.0
North Atlantic Division:				
Maine.....	a5.9	23.1	71.0	.....
New Hampshire.....	1.8	8.1	85.1	5.0
Vermont.....	a9.4	.....	85.6	5.0
Massachusetts.....	1.9	.....	98.1	Small.
Rhode Island.....	1.6	10.5	82.6	5.3
Connecticut.....	8.2	12.0	76.0	3.8
New York.....	1.6	21.2	70.2	7.0
New Jersey <i>b</i>	4.0	60.4	35.6	.....
Pennsylvania.....	.....	13.4	73.4	13.2
South Atlantic Division:				
Delaware <i>a b</i>	21.8	c2.2	76.0	.....
Maryland.....	3.1	31.6	59.2	6.1
District of Columbia.....	.....	d50.0	50.0	.....
Virginia.....	3.5	51.8	42.8	1.9
West Virginia.....	2.3	18.5	72.9	6.3
North Carolina.....	.....	79.1	f1.7	19.2
South Carolina.....	.....	85.4	10.6	4.0
Georgia <i>c</i>	12.8	54.5	27.9	4.8
Florida.....	6.0	14.2	79.8	.....
South Central Division:				
Kentucky.....	4.7	54.4	g35.0	5.9
Tennessee.....	7.5	67.0	16.4	9.1
Alabama <i>b</i>	16.0	51.8	ag32.2	Small.
Mississippi.....	7.0	38.3	44.1	10.6
Louisiana.....	5.2	34.2	35.0	25.6
Texas.....	44.3	35.9	12.5	7.3
Arkansas <i>b</i>	a3.7	45.2	49.8	1.3
North Central Division:				
Ohio.....	1.9	17.0	76.4	4.7
Indiana <i>b</i>	10.9	25.9	55.4	7.8
Illinois.....	5.1	8.2	82.9	3.8
Michigan.....	5.5	11.2	74.6	8.7
Wisconsin <i>b</i>	4.0	15.5	72.2	8.3
Minnesota <i>b</i>	7.5	10.6	63.0	18.9
Iowa.....	3.4	.....	84.5	12.1
Missouri.....	15.9	12.5	64.7	6.9
North Dakota <i>b</i>	9.3	11.8	73.3	5.6
South Dakota <i>b</i>.....	.....	14.8	80.6	4.6
Nebraska <i>b</i>	a14.7	4.6	52.4	28.3
Kansas <i>b</i>	7.2	.....	84.2	8.6
Western Division:				
Montana.....	.....	.....	96.1	3.9
Wyoming <i>a</i>.....	.....	.....	100.0	.....
Colorado <i>b</i>	5.2	.....	68.4	26.4
New Mexico.....	.....	.....	79.6	20.4
Arizona <i>b</i>.....	.....	1.0	99.0	.....
Utah.....	(h)	44.2	48.3	7.5
Nevada <i>b</i>	23.2	6.9	64.7	0.2
Idaho <i>b</i>.....	.....	.....	98.1	1.9
Washington.....	8.5	.....	78.5	18.0
Oregon.....	15.3	.....	70.4	14.3
California <i>b</i>	a4.4	47.3	46.4	1.9

a Approximately.*b* In 1889-90.*c* State appropriation for colored schools.*d* United States appropriation.*e* In 1890.*f* Some local taxes not reported.*g* Including voluntary subscriptions.*h* Included in "other sources."

RECEIPTS OF SCHOOL MONEYS.

(Tables 8, 9, and 10.)

The total receipts of school moneys, as tabulated, foot up to \$147,915,282.

Of this sum \$8,296,347, or 5.6 per cent of the whole, was the income of permanent school funds; \$27,631,657, or 18.7 per cent, was derived from State taxes; \$100,358,635, or 67.8 per cent, from local taxes; and \$11,628,643, or 7.9 per cent, from sources other than the foregoing.

More than two-thirds of all the money expended for common schools in the United States is raised by local taxation. Only about one-eighteenth is derived from the income of permanent school funds, and less than one-fifth from State taxes. These proportions vary greatly, however, in different parts of the Union, as will be seen by examination of Table 10.

The amount received from State taxes shows an increase of \$2,393,088. Pennsylvania and Georgia contribute largely to this increase. The State appropriation of Pennsylvania was increased in 1889 from \$1,500,000, at which figure it had stood for some years, to \$2,000,000.¹ The large increase in the case of Georgia is due to the assessing of a half-mill tax (increased to 1 mill in 1890) and to the allotting to the common schools of all taxes arising out of taxable property in the State in excess of \$360,000,000. Georgia schools received from the former source in 1889, \$165,000; from the latter, \$50,576.

Local taxes.—The aggregate increase of local taxation amounted to \$4,227,519. The large increase in the local tax of Maine (\$137,149) was for the purpose of first supply of free text-books. Illinois gained nearly \$2,000,000, an increase in one year in local taxes more than equal to the total amount raised from all sources in any Southern State except Maryland, Kentucky, and Texas. New York lost over a million dollars in local taxes, yet still raised nearly twice as much as all the Southern States put together.

These facts emphasize the difference in the sources of support of the schools North and South. In the latter section the conditions created by legislation are too often unfavorable, sometimes even antagonistic, to the development of the principle of local taxation for schools.

Relative amount raised by the several States.—In Table 9 the school revenue of each State has been compared with the number of male persons over 21 years of age (*i. e.*, with the number of taxpayers, or persons from whom in the main the school revenue is drawn), and also with the school population (*i. e.*, with the number of persons for whose benefit it is raised). These are significant ratios, whereas the revenue per capita of population has no bearing on the matter. See remarks on p. 9.

¹The legislature of 1891 made a further increase of the State appropriation, raising it to the munificent sum of \$5,000,000.

Few persons have any idea of the extent to which the relative number of taxpayers¹ and school population varies in different localities. In some parts of the Union there are three, four, and even five times as many taxpayers to the hundred children as in others. The bearing of this upon the ease or difficulty of raising funds for schools is obvious, and it may be said that this hitherto almost unnoticed circumstance serves in no small measure to account for the backward condition of public education in certain sections, especially in some States of the South. An inspection of column 8, Table 9, will make this apparent.

In the United States at large, on the average, there are 91.4 taxpayers to provide the means of education for each 100 children 5 to 18 years of age. In the South Central States, however, there are only 65.9 adult males to 100 children, while in the States of the western division there are 156.7.

Taking individual States, it will be seen that in South Carolina 100 children have only 55 adult males (three-fifths, or 33, of whom moreover are colored) to provide the means of education for them, while in Montana there are 274 adult males to educate an equal number of children. That is to say (assuming that wages, prices of material, etc., are identical in the two States), in order to duplicate the educational conditions of Montana, each individual taxpayer of South Carolina would be subject to pay, on the average, five times the amount the taxpayer of Montana is obliged to pay.

These are the extremes, but analogous conditions prevail, in a somewhat less degree, in the Southern States generally, as compared with the Northern.

Examining the actual amounts raised per taxpayer and per child of school age (columns 6 and 7), it will be seen that Montana raises \$5.85 per taxpayer, which furnishes \$16.02 for each child of school age; Texas, on the other hand, raises a larger sum per taxpayer (\$6.55), but has as a result only \$4.48 for each child of school age. In other words, each dollar paid in Montana goes as far in effective work in supporting the public schools as \$4 in Texas.

Mississippi, after raising per taxpayer about half what Nevada does, has only about one-eighth as much as the latter State for each child of school age.

In the light of these facts, and considering in addition that a large proportion of the already comparatively few adults in the South are colored people with a minimum of property, it can not but be a matter of satisfaction that public education has made such progress in the South since the war as has actually been the case. Raising per taxpayer (counting in white and black alike) about one-half, and realizing from the proceeds from one-third to one-fifth of what the North has per child of school age, that section enrolls nearly as large a propor-

¹ The term "taxpayer" is understood here to be synonymous with adult male.

tion of its school population (Table 2, column 11), and has a school term about two-thirds as long as is held in the North (Table 4, column 8).

Beneficial results of a State tax.—Public schools are their own best recommendation. It has been the almost universal experience that where once established they have continually grown in the public esteem. When the children who have been educated mainly in State-supported or State-prescribed schools become the fathers of a succeeding generation, they have a lively sense of the benefits that were conferred upon them by the public schools, and demand and voluntarily provide increased privileges for their own children. Thus State compulsion and support pave the way for local endeavor. In Massachusetts, a State whose people have so long felt the influences of public schools, 98 per cent of the ample school revenues are raised by what is essentially voluntary taxation. The remaining 2 per cent comes chiefly from a State fund so distributed as to assist the poorer towns and aid in equalizing the burden of taxation, this being the office of a State tax or fund in a well-established system.

State Superintendent Edwards, of Illinois, records a very instructive experience bearing upon this subject. "In 1855," he says, "to induce the districts to tax themselves at all the State offered a bounty of nearly \$2 for every dollar thus voluntarily raised. In that year one county raised by taxation \$1,737.04 and received by distribution \$4,917.25. In this same county at the present time the total withdrawal of the State distribution would probably affect the school interest very little. In 1887 for every dollar distributed by the State the districts themselves, by voluntary election, raised a little more than \$5.03. Measured by this standard may we not say that the popular interest in education, the real love of the free schools in the hearts of the people, increased tenfold in thirty-two years?"

Progress in local taxation in the South.—It can scarcely be doubted that the few Southern States which yet do not make any general provision for local taxation, or at most some provision which is practically inoperative, will change their policy in this respect in the near future, and will cease requiring communities to procure a special act of legislature to enable them to tax themselves for schools, as is now the case with several of them. The Alabama Educational Association in 1890 petitioned "for such amendment of our State constitution as will authorize any desired local taxation that will increase the efficiency of our common schools; provided that such taxes be voted upon only by taxpayers." Also State Superintendent Harris says in his 1891 report that "there is a growing indorsement of local taxation for public schools."

The North Carolina law contains certain provisions for voluntary local taxation, but they are "so restricted that they have not proved of any advantage. They should be amended so that it will be less

difficult to get to a vote," says State Superintendent Finger, "and so that a larger amount can be voted upon." In accordance with this recommendation, the amount that could be voted was slightly increased by the legislature in 1891, but it is still small and the law clumsy in execution.

The South Carolina legislature enacted a general local tax law in 1888, which, though so cumbersome as to be of practically little value, yet indicates progress in public opinion upon the subject. The difficulties are of the same nature as with the North Carolina law; the trustees of school districts can act in the matter of levying a local tax only upon the petition of a majority of resident freeholders, and then must put the question to the vote of the property-owners. Only a few districts have taken advantage of this law. State Superintendent Rice in his 1891 report calls for a more practical law:

The act of 1888 should be amended and made more easily operative. There should be a general act authorizing and requiring the county commissioners of each county to submit the question, at each general election, to the qualified voters of the county, as to whether or not more than 2 mills shall be levied, etc.

As regards Texas, State Supt. Cooper reports (1890):

The law framed in pursuance of the constitutional amendment of 1883 authorizing local taxation, throws many obstacles in the way of the levy of local taxes, while the true spirit of the law should be to facilitate as far as possible such levy, even if it should not absolutely require it. The law, as it stands now on our statute books, is distinctly behind public sentiment in this State, and ought to be amended so as to allow the people to vote each year, in every school district which has not voted a tax, on the question of levying a tax until such tax shall be voted. * * *

Realizing the necessity of general local taxation to the development of an efficient system of public schools, I have deemed it my duty during the past two years to use every means in my power to bring the question of levying a local school tax to the attention of local officers and others interested in the progress of public schools. * * *

In spite of all the limitations of the constitution and the law and the obstruction thrown in the way of the levy of local taxes by the law as it stands, progress has been made in the levy of local school taxes. * * * It is probable that the number of districts which have voted local taxes during the past twelve months is about double the number which had voted the tax prior to that time and subsequent to the adoption of the constitutional amendment of 1883. This is a remarkable record when the fact is considered that the obstructions to the levy of a local tax, resulting from errors in the laws on this subject, are in themselves sufficient to prevent most districts from making any effort; and it demonstrates the fact that a simple, sensible law providing for local taxation would be welcomed by the great body of the people of Texas.

A weak point in exclusively local taxation.—The extent to which local taxation is carried in Massachusetts (98 per cent of the school revenue being derived from local taxes) brings into special prominence the principal defect of this system of school support; *i. e.*, the great inequality in the tax rate of the different towns. Thus in 1890-91 Boston, with a tax rate of less than 2 mills, was able to appropriate \$21.92 for each child 5 to 15 years of age, while Colerain, with a tax rate of 5.4 mills, was able to appropriate only \$7.71 per child. These inequalities (which are

nearly paralleled in other States) are glaring and have led those interested in the matter to introduce a bill into the legislature "to change the present system of support of the public schools so that the rate of school taxation shall be uniform throughout this State. This is to be done by including the amount necessary for schools in the State tax, and distributing it among the different towns in proportion to the number of public school children in such towns." [Journal of Education, March 10, 1892.

While the Southern States, therefore, are moving in the direction of voluntary local taxation, Massachusetts, Pennsylvania (see above), and other Northern States, having experienced the ills of too exclusively local taxation, are going in the opposite direction with the main purpose in view of equalizing the tax rate and helping the poorer communities out of a general State fund. An equilibrium between State and local taxation will finally be struck, and the most advantageous proportions of each determined by experience according to the necessities of each individual case. The object in view will be to utilize the benefits and reduce to a minimum the defects of each.

The tax rates of different States can not be compared with each other.— On account of the great diversity in the bases of assessment of property in the different States, a comparison of tax rates does not furnish any indication as to how light or heavy a tax may be. In some States property is assessed at only about one-third of its real value, in others at two-thirds or more; and a tax rate of 2 mills on the dollar in one locality may be quite as severe as 4 mills in another. It has on a like ground not been deemed best to continue in these tables the comparison of the school expenditure with assessed valuation.

TABLE 11.—Growth of expenditure since 1870-71.

State or Territory.	Total amount expended for schools.				Expenditure per capita of population.			
	1870-71.	1879-80.	1889-90.	1890-91.	1870-71.	1879-80.	1889-90.	1890-91.
1	2	3	4	5	6	7	8	9
UNITED STATES.....	\$60,107,612	\$78,094,687	\$140,506,715	\$146,800,163	\$1.75	\$1.56	\$2.24	\$2.31
North Atlantic Division...	29,796,855	28,598,058	48,023,492	49,006,135	2.38	1.97	2.76	2.78
South Atlantic Division...	3,781,581	5,130,492	8,767,165	9,276,892	.69	.68	.99	1.03
South Central Division...	4,854,834	4,872,829	10,678,680	11,571,110	.73	.55	.97	1.04
Western Division	28,430,093	35,285,635	62,823,563	64,929,946	2.14	2.03	2.81	2.87
	2,244,329	4,267,673	10,213,815	12,016,080	2.15	2.41	3.37	3.80
North Atlantic Division:								
Maine	950,662	1,067,991	1,327,553	1,485,593	1.51	1.65	2.01	2.25
New Hampshire	418,545	565,339	844,333	890,583	1.30	1.63	2.24	2.35
Vermont	499,961	446,217	711,072	700,559	1.51	1.34	2.14	2.18
Massachusetts	5,579,363	4,983,900	8,286,062	8,554,546	3.73	2.80	3.70	3.76
Rhode Island	461,160	526,112	884,966	1,022,597	2.05	1.60	2.56	2.92
Connecticut	1,496,981	1,408,375	2,157,014	2,167,079	2.75	2.26	2.89	2.86
New York	9,607,904	10,296,977	17,543,880	17,326,280	2.17	2.03	2.92	2.85
New Jersey	2,302,341	1,873,465	3,840,190	63,340,190	2.48	1.66	2.51	c2.31
Pennsylvania	8,479,918	7,369,682	12,928,422	13,518,708	2.36	1.72	2.46	2.52
South Atlantic Division:								
Delaware	153,569	207,281	a275,000	a275,000	1.21	1.41	1.63	a1.63
Maryland	1,214,729	1,544,367	1,910,663	2,221,281	1.53	1.65	1.83	2.11
District of Columbia	373,535	438,567	905,777	900,638	2.77	2.47	3.93	3.69
Virginia	587,472	946,109	1,604,509	1,636,983	.47	.63	.97	.98
West Virginia	577,719	707,553	1,198,493	1,360,823	1.26	1.14	1.57	1.79
North Carolina	177,498	376,062	714,900	676,618	.16	.27	.44	.41
South Carolina	275,688	324,629	450,936	450,936	.38	.33	.39	c.39
Georgia	292,000	471,029	1,190,354	b1,190,354	.24	.31	.65	b.65
Florida	129,431	114,895	516,353	564,259	.66	.43	1.32	1.39
South Central Division:								
Kentucky	a1,075,000	1,069,030	2,140,678	2,308,505	.80	.65	1.15	1.22
Tennessee	a758,000	744,180	1,526,241	1,724,059	.59	.48	.86	.96
Alabama	a370,000	a500,000	a890,000	a890,000	.36	.40	.59	a.c.59
Mississippi	950,000	830,705	1,109,575	1,169,088	1.11	.73	.86	.89
Louisiana	531,834	411,853	817,110	867,653	.71	.44	.73	.76
Texas	a550,000	a1,030,000	3,178,300	3,595,029	.74	.65	1.42	1.55
Arkansas	a520,000	287,056	1,016,776	a1,016,776	1.02	.36	.90	c.90
North Central Division:								
Ohio	6,831,035	7,166,963	10,602,238	10,817,286	2.52	2.24	2.89	2.93
Indiana	a2,897,537	4,491,850	5,245,218	c5,245,218	1.70	2.27	2.39	c2.39
Illinois	6,656,542	7,014,092	11,645,126	13,512,778	2.57	2.28	3.04	3.48
Michigan	2,840,740	2,775,917	5,349,366	5,458,841	2.33	1.70	2.55	2.56
Wisconsin	1,932,539	2,177,023	3,801,212	3,920,377	1.79	1.65	2.25	2.27
Minnesota	960,558	1,328,429	4,187,310	c4,187,310	2.06	1.70	3.22	c3.22
Iowa	3,269,190	4,484,043	6,382,953	6,706,249	2.70	2.76	3.34	3.47
Missouri	1,749,049	2,675,314	5,434,262	5,530,943	.99	1.23	2.03	2.02
North Dakota	a23,000	245,000	626,949	a626,949	1.29	1.81	3.43	c3.43
South Dakota			1,199,630	c1,199,630			3.65	c3.65
Nebraska	305,520	1,108,617	3,376,332	3,299,743	2.61	2.45	3.19	2.98
Kansas	904,323	1,818,337	4,972,967	4,424,442	2.24	1.83	3.49	3.15
Western Division:								
Montana	a35,600	78,730	364,084	577,601	1.62	2.01	2.76	3.87
Wyoming	67,000	28,504	225,000	262,959	.71	1.37	3.71	3.89
Colorado	67,395	395,227	1,681,379	c1,681,379	1.44	2.03	4.08	c4.08
New Mexico	a4,900	28,973	a85,000	a81,859	.05	.24	.55	a.52
Arizona		61,172	181,914	c181,914		1.51	3.05	c3.05
Utah	a117,000	132,194	394,685	533,935	1.28	.92	1.90	2.42
Nevada	a85,000	220,245	161,481	c161,481	1.93	3.54	3.53	c3.53
Idaho	19,003	38,411	169,020	c169,020	1.17	1.18	2.00	c2.00
Washington	a35,000	112,615	958,111	2,120,544	1.30	1.50	2.74	5.03
Oregon	a160,000	307,031	805,979	1,058,226	1.65	1.76	2.57	3.12
California	1,713,431	2,864,571	5,187,162	c5,187,162	2.93	3.31	4.29	c4.29

a Approximately

b In 1890.

c In 1889-90.

TABLE 12.—*School expenditures, 1890-'91.*

State or Territory.	Permanent expenditure.				Current expenditures.				Total expenditure, excluding debt paid.	Increase or decrease the last year reported.		Per cent of increase or decrease.
	Sites, buildings, furniture, libraries, and apparatus.		Increase or decrease the last year reported.		Per cent of increase or decrease.		Increase or decrease the last year reported.			Per cent of increase or decrease.		
	1	2	3	4	5	6	7	8		9	10		11
	Dollars.	Dollars.	Dollars.	Per cent.	Dollars.	Dollars.	Per cent.	Dollars.	Dollars.	Dollars.	Per cent.	
UNITED STATES	25,851,261	671,405	D. 2.53	D. 7.61	95,791,630	I. 1,397,426	I. 5.43	25,167,272	146,800,163	I. 7,393,377	I. 5.30	
North Atlantic Division.....	10,034,327	825,936	D. 2.53	D. 7.61	30,220,647	I. 1,397,426	I. 4.85	8,751,161	49,006,135	I. 999,766	I. 2.08	
South Atlantic Division.....	1,279,589	218,618	I. 20.60	I. 20.60	6,975,945	I. 382,365	I. 5.80	1,021,358	9,276,892	I. 745,737	I. 8.74	
South Central Division.....	1,162,186	219,062	I. 23.24	I. 23.24	9,419,094	I. 728,007	I. 8.38	989,830	11,571,110	I. 991,597	I. 9.37	
North Central Division.....	9,936,774	1,161,901	D. 10.47	D. 10.47	42,182,821	I. 1,523,971	I. 3.75	12,810,351	64,929,946	I. 2,494,783	I. 4.00	
Western Division.....	3,438,385	878,752	I. 34.34	I. 34.34	6,993,123	I. 901,151	I. 14.79	1,584,572	12,016,080	I. 2,161,494	I. 21.94	
North Atlantic Division:												
Maine.....	109,728	66,524	D. 37.74	D. 37.74	6,838,057	I. 35,326	I. 4.40	6,537,808	1,485,593	I. 158,040	I. 11.90	
New Hampshire.....	149,647	59,905	D. 28.59	D. 28.59	539,994	I. 25,122	I. 4.88	6,200,942	890,583	I. 46,250	I. 5.48	
Vermont.....	70,559	12,653	D. 15.21	D. 15.21	560,000	I. 10,798	I. 2.00	60,000	700,559	I. 10,513	I. 1.48	
Massachusetts.....	1,373,542	8,647	D. 63.47	D. 63.47	6,516,782	I. 192,732	I. 3.62	1,684,222	8,554,516	I. 268,484	I. 3.24	
Rhode Island.....	264,505	54,938	I. 25.92	I. 25.92	634,417	I. 66,120	I. 11.64	123,615	1,022,597	I. 137,631	I. 15.55	
Connecticut.....	421,823	44,986	I. 11.94	I. 11.94	1,401,820	I. 38,557	I. 2.83	343,436	2,167,079	I. 10,065	I. .47	
New York.....	4,152,266	852,842	D. 17.04	D. 17.04	11,193,586	I. 538,370	I. 6.25	1,980,458	17,326,280	I. 217,000	I. 1.24	
New Jersey.....	509,509	70,089	D. 11.65	D. 11.65	2,234,585	I. 46,585	I. 2.08	436,096	3,340,190	I. 17,123	I. .52	
Pennsylvania.....	2,892,683	154,250	I. 5.63	I. 5.63	7,261,456	I. 323,766	I. 4.67	3,364,584	13,518,708	I. 590,286	I. 4.57	
South Atlantic Division:												
Delaware.....	22,795	2,895	I. 13.85	I. 13.85	225,000	I. 11,000	I. 5.14	26,205	275,000	I. 15,000	I. 5.77	
Maryland.....	386,621	219,192	I. 130.90	I. 130.90	1,557,828	I. 65,459	I. 4.39	276,832	2,221,281	I. 310,618	I. 16.25	
District of Columbia.....	229,078	25,501	D. 10.02	D. 10.02	549,513	I. 36,412	I. 7.10	122,047	900,638	I. 5,139	I. .57	
Virginia.....	130,035	5,419	D. 3.79	D. 3.79	1,322,997	I. 29,707	I. 2.30	164,851	1,636,983	I. 32,474	I. 2.02	
West Virginia.....	203,688	32,235	I. 18.79	I. 18.79	864,823	I. 11,619	I. 1.36	292,312	1,360,823	I. 162,330	I. 13.55	
North Carolina.....	63,626	9,994	D. 13.58	D. 13.58	556,643	I. 18,104	I. 3.15	56,349	676,618	I. 38,282	I. 5.36	
South Carolina.....	39,293	2,007	D. 4.86	D. 4.86	396,631	I. 8,253	I. 2.04	15,312	450,936	I. 9,463	I. 2.05	
Georgia.....	120,397	42,667	I. 54.89	I. 54.89	1,054,724	I. 177,793	I. 20.27	15,233	1,190,354	I. 290,473	I. 24.01	
Florida.....	63,056	35,450	D. 35.99	D. 35.99	448,986	I. 76,912	I. 20.67	52,217	564,259	I. 47,726	I. 9.24	
South Central Division:												
Kentucky.....	333,007	77,868	I. 30.52	I. 30.52	1,925,215	I. 84,462	I. 4.59	50,233	2,308,505	I. 167,827	I. 7.84	
Tennessee.....	189,643	35,959	D. 15.94	D. 15.94	1,422,925	I. 207,089	I. 17.04	111,491	1,724,059	I. 197,818	I. 12.96	
Alabama.....	150,000	60,808	I. 68.17	I. 68.17	660,000	I. 6,102	I. .93	80,000	890,000	I. 50,000	I. 5.55	

a Approximately.

b Including cost of free text-books.

c In 1889-'90.

d City of Wilmington only.

e Some expenditures in cities not reported.

f In 1890.

TABLE 12.—*School expenditures, 1890-'91—Continued.*

State or Territory.	Permanent expenditure.				Current expenditures.				Total expenditure, excluding current debt paid.	Increase or decrease the last year reported.	Per cent of increase or decrease.
	2	3	4	5	6	7	8	9			
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Per cent.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Per cent.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>		
South Central Division—continued.											
Mississippi.....	32,289	I..	I.. 39.43	1,017,757	I..	I.. 4.47	119,042	1,199,088	I..	59,513	I.. 5.36
Louisiana.....	39,414	I..	I.. 39.67	1,577,865	I..	I.. 6.02	259,374	1,837,239	I..	50,543	I.. 6.19
Texas.....	306,122	I..	I.. 38.07	2,945,433	I..	I.. 11.94	343,474	3,288,907	I..	415,729	I.. 13.11
Arkansas.....	111,711	I..	I.. 11.60	869,839	I..	I.. 4.80	35,166	1,016,776	I..	49,167	I.. 5.08
North Central Division:											
Ohio.....	1,332,979	D..	D.. 10.45	7,210,586	I..	I.. 3.35	2,273,741	10,817,296	I..	215,048	I.. 2.04
Indiana.....	734,491	I..	I.. 19.04	4,100,614	I..	I.. 3.35	400,113	5,215,218	I..	287,592	I.. 5.80
Illinois.....	2,327,061	D..	D.. 1.36	7,083,355	I..	I.. 4.53	3,500,362	13,512,778	I..	1,867,652	I.. 16.04
Michigan.....	865,350	D..	D.. 9.97	3,432,689	I..	I.. 3.27	1,220,692	4,653,381	I..	109,475	I.. 2.05
Wisconsin.....	551,872	D..	D.. 12.73	2,061,813	I..	I.. 3.79	703,692	2,765,505	I..	119,165	I.. 3.14
Minnesota.....	724,286	D..	D.. 20.01	2,528,609	I..	I.. 14.56	934,415	3,463,024	I..	144,052	I.. 3.56
Iowa.....	60,062	I..	I.. 6.73	4,458,590	I..	I.. 3.24	1,235,227	5,693,817	I..	323,296	I.. 5.07
Missouri.....	952,612	I..	I.. 1.15	3,683,312	I..	I.. 6.08	731,668	4,414,980	I..	96,081	I.. 1.78
Nebraska.....	84,992	D..	D.. 23.46	381,472	I..	I.. 2.84	160,485	541,957	I..	28,029	I.. 4.28
North Dakota.....	2,007	D..	D.. 1.34	7,808,702	D..	D.. 2.66	243,513	8,052,215	I..	15,035	I.. 1.24
South Dakota.....	147,415	D..	D.. 18.15	2,194,288	I..	I.. 3.18	355,821	2,549,709	I..	76,589	I.. 2.27
Nebraska.....	749,634	D..	D.. 51.63	3,033,761	I..	I.. 12.685	930,512	4,424,442	I..	548,525	I.. 11.03
Kansas.....	460,169	D..	D.. 132.67	267,001	I..	I.. 8.76	67,292	577,601	I..	213,517	I.. 58.64
Western Division:											
Montana.....	243,308	I..	I.. 19.08	108,758	I..	I.. 14.49	64,883	1,652,959	I..	174,037	I.. 16.87
Wyoming.....	89,318	I..	I.. 51.29	818,605	I..	I.. 10.46	255,271	1,073,876	I..	3,141	I.. 11.54
Colorado.....	607,503	I..	I.. 5.182	53,724	D..	D.. 12.963	12,963	620,466	I..	27,085	I.. 17.50
New Mexico.....	15,182	I..	I.. 9.18	127,608	I..	I.. 52.55	74,642	181,914	I..	139,250	I.. 35.28
Arizona.....	54,306	I..	I.. 47.16	295,831	I..	I.. 19	15,336	533,935	I..	101,481	I.. 6.30
Utah.....	163,412	I..	I.. 25.62	135,800	I..	I.. 6.192	20,888	164,288	I..	16,934	I.. 11.13
Nevada.....	10,345	I..	I.. 25.62	121,582	I..	I.. 51.29	272,690	169,020	I..	1,169,433	I.. 121.33
Idaho.....	26,550	I..	I.. 43.51	713,932	I..	I.. 18.79	33,613	2,190,544	I..	252,247	I.. 31.30
Washington.....	1,233,863	I..	I.. 20.34	687,828	I..	I.. 7.42	706,995	1,938,226	I..	124,031	I.. 2.45
Oregon.....	277,055	I..	I.. 20.34	3,662,654	I..	I.. 7.42	706,995	5,187,162	I..	124,031	I.. 2.45
California.....	817,513	D..	D.. 20.34	3,662,654	I..	I.. 7.42	706,995	5,187,162	I..	124,031	I.. 2.45

c Approximately.

b Including all expenditures in cities.

a In 1889-'90.

TABLE 13.—*Expenditure per pupil; percentage classification of school expenditure.*

State or Territory.	Amount expended per pupil in attendance for—				Percentage (of the total expenditure) devoted to—		
	Sites, buildings, and furniture.	Salaries.	Other purposes.	Total per pupil.	Sites, buildings, and furniture.	Salaries.	Other purposes.
1	2	3	4	5	6	7	8
UNITED STATES.....	\$3.10	\$11.50	\$3.02	\$17.62	<i>Per cent.</i> 17.6	<i>Per cent.</i> 65.3	<i>Per cent.</i> 17.1
North Atlantic Division.....	4.84	14.59	4.22	23.65	20.5	61.7	17.8
South Atlantic Division.....	1.14	6.20	.91	8.25	13.8	75.2	11.0
South Central Division.....	.76	6.18	.65	7.59	10.0	81.4	8.6
North Central Division.....	3.06	12.96	3.94	19.96	15.3	65.0	19.7
Western Division.....	9.74	19.80	4.49	34.03	28.6	58.2	13.2
North Atlantic Division:							
Maine.....	1.06	a8.13	b5.22	14.41	7.4	a65.4	b36.2
New Hampshire.....	3.55	12.83	b4.77	21.15	16.8	60.6	b22.6
Vermont.....	1.55	12.10	a1.76	15.41	10.1	78.5	a11.4
Massachusetts.....	4.93	a19.80	b5.97	30.70	16.0	a64.5	b19.5
Rhode Island.....	7.58	18.17	3.54	29.30	25.9	62.0	12.1
Connecticut.....	5.00	16.63	4.07	25.70	19.5	64.7	15.8
New York.....	6.39	17.22	3.05	26.66	24.0	64.6	11.4
New Jersey c.....	4.50	17.14	3.42	25.06	17.9	68.4	13.7
Pennsylvania.....	4.13	10.37	4.81	19.31	21.4	53.7	24.9
South Atlantic Division:							
Delaware a c.....	d1.21	11.45	1.34	14.00	d8.7	81.8	9.5
Maryland.....	3.64	14.67	2.61	20.92	17.4	70.1	12.5
District of Columbia.....	7.90	18.94	4.20	31.04	25.4	61.0	13.6
Virginia.....	.78	6.83	.85	8.46	9.2	80.8	10.0
West Virginia.....	1.64	6.97	2.36	10.97	15.0	63.5	21.5
North Carolina e.....	.32	2.76	.28	3.36	9.4	82.3	8.3
South Carolina e.....	.26	2.67	.10	3.03	8.7	87.9	3.4
Georgia f.....	.50	4.38	.06	4.94	10.1	88.6	1.3
Florida.....	a1.02	7.24	.84	9.10	a11.2	79.6	9.2
South Central Division:							
Kentucky.....	1.36	7.85	.20	9.41	14.4	83.4	2.2
Tennessee.....	.56	4.21	.33	5.10	11.0	82.5	6.5
Alabama a c.....	.82	3.62	.44	4.88	16.9	74.2	8.9
Mississippi.....	.16	5.15	.60	5.91	2.8	87.1	10.1
Louisiana.....	.43	6.29	2.73	9.45	4.5	66.6	28.9
Texas.....	.96	9.23	1.08	11.27	8.5	81.9	9.6
Arkansas e.....	.75	5.85	.24	6.84	11.0	85.6	3.4
North Central Division:							
Ohio.....	2.38	12.87	4.06	19.31	12.3	66.7	21.0
Indiana e.....	2.17	11.98	1.17	15.32	14.2	78.2	7.6
Illinois.....	4.37	14.43	6.57	25.37	17.2	56.9	25.9
Michigan.....	2.70	11.50	4.09	18.29	14.8	62.9	22.3
Wisconsin.....	2.70	13.03	3.44	19.17	14.1	63.0	17.9
Minnesota e.....	5.70	19.90	7.36	32.96	17.3	60.4	22.3
Iowa.....	3.00	14.05	4.08	21.13	14.2	66.5	19.3
Missouri.....	2.56	8.94	1.92	13.42	19.1	66.6	14.3
North Dakota c.....	4.11	18.43	7.76	30.30	13.6	60.8	25.6
South Dakota c.....	3.05	16.73	5.04	24.82	12.3	67.4	20.3
Nebraska.....	5.12	15.00	2.43	22.55	22.7	66.5	10.8
Kansas.....	1.87	12.23	3.78	17.98	10.4	63.6	21.0
Western Division:							
Montana.....	20.12	22.08	5.56	47.76	42.1	46.2	11.7
Wyoming.....	15.40	18.75	11.19	45.34	34.0	41.4	24.6
Colorado e.....	15.69	21.15	6.59	43.45	36.1	48.7	15.2
New Mexico a.....	1.05	3.72	.90	5.67	18.5	65.6	15.9
Arizona e.....	11.55	27.13	.....	38.68	29.9	70.1	.....
Utah.....	6.20	11.22	2.83	20.25	30.6	55.4	14.0
Nevada e.....	2.04	26.82	3.03	31.89	6.4	84.1	9.5
Idaho e.....	2.79	12.80	2.20	17.79	15.7	71.9	12.4
Washington.....	25.54	16.08	6.14	47.76	53.5	33.7	12.8
Oregon.....	6.10	15.14	2.06	23.30	26.2	65.0	8.8
California e.....	5.58	24.99	4.82	35.39	15.8	70.6	13.6

a Approximately.

b Including cost of free text-books.

c In 1889-90.

d Expenditure of the city of Wilmington only.

e Some expenditure in cities not reported.

f In 1890.

TABLE 14.—*Expenditure per pupil per month.*

State or Territory.	Expended per pupil per month.		State or Territory.	Expended per pupil per month.	
	For sala- ries.	Total ex- pendi- ture.		For sala- ries.	Total ex- pendi- ture.
1	2	3	1	2	3
UNITED STATES	\$1.70	\$2.60	South Central Division— Continued.		
North Atlantic Division.....	1.74	2.82	Mississippi	\$1.22	\$1.46
South Atlantic Division.....	1.24	1.64	Louisiana	1.26	1.88
South Central Division	1.80	1.60	Texas	2.00	2.44
North Central Division	1.76	2.72	Arkansas <i>b</i>	1.56	1.82
Western Division	2.96	5.08	North Central Division:		
North Atlantic Division:			Ohio	1.60	2.42
Maine	<i>a</i> \$1.54	\$2.74	Indiana <i>b</i>	1.84	2.36
New Hampshire.....	2.16	3.56	Illinois	1.78	3.12
Vermont	1.76	2.24	Michigan	1.50	2.38
Massachusetts	<i>a</i> 2.34	3.64	Wisconsin	1.62	2.40
Rhode Island	1.94	3.12	Minnesota <i>b</i>	3.12	5.16
Connecticut.....	1.82	2.82	Iowa	1.80	2.70
New York	1.82	2.82	Missouri	1.42	2.12
New Jersey <i>b</i>	1.76	2.62	North Dakota <i>b</i>	3.26	5.36
Pennsylvania	1.34	2.48	South Dakota <i>b</i>		
South Atlantic Division:			Nebraska	2.16	3.24
Delaware <i>a b</i>	1.38	1.68	Kansas	1.94	2.82
Maryland	1.60	2.28	Western Division:		
District of Columbia	2.12	3.46	Montana	2.82	6.10
Virginia	1.18	1.46	Wyoming	3.12	7.56
West Virginia	1.46	2.28	Colorado <i>b</i>	2.92	6.02
North Carolina <i>c</i> .....	.92	1.12	New Mexico <i>a</i>	1.06	1.62
South Carolina <i>b</i> .....	.76	.86	Arizona <i>b</i>	4.30	6.14
Georgia <i>d</i>	1.06	1.18	Utah	1.72	3.12
Florida	1.20	1.52	Nevada <i>b</i>	3.84	4.56
South Central Division:			Idaho <i>b</i>	2.66	5.10
Kentucky	1.56	1.88	Washington	3.16	9.40
Tennessee .....	.88	1.06	Oregon	2.72	4.20
Alabama <i>a b</i> .....	.98	1.32	California <i>b</i>	3.16	4.50

a Approximately.*b* In 1889-90.*c* Some expenditure in cities not reported.*d* In 1890.

SCHOOL EXPENDITURE.

(Tables 11, 12, 13, and 14).

Growth—gain and loss.—The total amount expended for common schools in 1890-91 was \$146,800,163, an increase in one year of over \$7,000,000, or 5.30 per cent. This is more than double the annual rate of increase of the population, and indicates how fast the school expenditure has been gaining upon the population the past year.

This is also shown in the expenditure per capita of population (Table 11). In 1889-90 the expenditure for common schools per capita of population was \$2.24; in 1890-91 it had advanced to \$2.31, reaching a much higher point than ever before. In 1879-80 it was only \$1.56. It has thus increased 50 per cent in eleven years, while the actual gross expenditure has nearly doubled in the same period, having increased from \$78,000,000 to \$147,000,000.

The States of the North Central Division expended for common schools in 1890-91 more than all the States of the Union did as late as 1869-70, so rapid has progress been in this particular.

The greatest rate of gain during the past year has been made in the States of the Western Division (Table 12). In these States the total expenditure for schools increased over one-fifth (21.94 per cent), while the expenditure for schoolhouses, grounds, etc., increased over one-third (34.34 per cent).

The State of Washington shows a phenomenal increase. In that State the expenditure for houses and grounds was more than trebled the past year, and the total expenditure more than doubled.

The Southern States, in general, show a very gratifying increase of total expenditure, nearly 10 per cent on an average. The expenditure for schoolhouses and grounds shows a net gain of 21 per cent in the South Atlantic States and 23 per cent in the South Central States. The actual amount expended for these purposes in that section is still small, however. Either New York or Pennsylvania expends more for schoolhouses and grounds than all the States of the two Southern divisions taken together, and Illinois nearly as much.

The gain in the permanent expenditure of the South Atlantic States, it must be noted, is due to the increased activity in building in three States, viz, Maryland, West Virginia, and Georgia. In all the other States of that division except Delaware there has been a decrease.

The Northern Atlantic and Central States also show a net decrease in the amount expended for buildings and grounds of about \$2,000,000, or about 9 per cent. Of the 21 States of which these two divisions are composed, 15 show a falling off in this class of expenditure.

The total increase in the amount paid teachers and superintendents was \$4,932,920, a gain of 5.43 per cent. There were only three States showing a decrease in the amount paid for teaching, viz., North Carolina, South Carolina, and South Dakota, besides the Territory of New Mexico.

Expenditure per pupil.—The average amount expended for each pupil in attendance (Table 13) was \$17.62. This amount has been gradually rising since 1879-80, at which time it was \$12.71.

The expenditure per pupil reaches its maximum in the States and Territories of the western division, where it is \$34.03, or twice the average. How this excessive expenditure is made without a correspondingly heavy strain on the individual taxpayer will be understood from the remarks under the head of "receipts" (p. 24).

The expenditure per pupil for tuition alone is in the North from two to three times what it is in the South. This arises in great part from the longer school term in the North. To get the relative cost of the schools while they are in session, equal periods of time must be taken.

Table 14 accordingly has been computed, giving the expenditure per pupil per month, first, for tuition alone, and second, for all purposes. For tuition alone the two southern divisions pay out on an average for each pupil, white and black, each month, \$1.24 and \$1.30 respectively; the North Atlantic Division, \$1.74, and the North Central Division \$1.76. The difference is small when all the circumstances that have been noticed are taken into consideration.

The total expenditure per pupil per month is greatest in the State of Washington, viz, \$9.40. This is eleven times what it is in South Carolina and nearly three times what it is in Massachusetts. If tuition alone is considered, Arizona leads with \$4.30 per pupil per month, and Nevada comes second with \$3.84.

Laws relating to school attend-

[From the Educational Re-

States and Territories.	Compulsory age.	Amount of required attendance in each year.	Officers charged with enforcement of the law.	Penalty on parents or guardians.
California	8-14	Two-thirds of school term.	Clerk of board of education or district trustees.	Fine of not more than \$20 and costs for first offense; and \$20 to \$50 and costs for each subsequent offense.
Colorado	8-14	12 weeks	Any school director....	Fine of \$5 to \$25 each offense.
Connecticut	8-16	While schools are in session.	Truant officers.....	Fine of \$5 for each week's failure to comply with law.
District of Columbia.	6-14	12 weeks .....	.....	Fine of \$20.....
Idaho.....	8-14	12 weeks.....	School trustees	Fine of \$5 to \$25 for first and \$10 to \$50 for each subsequent offense.
Illinois	7-14	16 weeks.....	Truant officers appointed by boards of education and school directors.	Fine of \$1 to \$20
Kansas	8-14	12 weeks.....	School directors and presidents of boards of education.	Fine of \$5 to \$10 for first, and \$10 to \$20 for each subsequent offense.
Maine	8-15	16 weeks.....	Truant officers.....	Fine of not more than \$25.
Massachusetts.....	a 8-14	30 weeks, if schools are kept, otherwise 20.	Truant officers and school committees.	Fine of not more than \$20.
Michigan.....	8-14	4 months	Truant officers and school boards.	.....
Minnesota	8-16	12 weeks	School directors and presidents of boards of education.	Fine of \$10 to \$25 for first, and \$25 to \$50 for each subsequent offense.
Montana.....	8-14	12 weeks	School directors and presidents of boards of education.	Fine as in Kansas, with alternative of 30 days in county jail.
Nebraska.....	8-14	12 weeks .....	.....	Fine of \$10 to \$50.
Nevada.....	8-14	16 weeks.....	School trustees.....	Fine of \$50 to \$100 for first and \$100 to \$200 for each subsequent offense.
New Hampshire.....	8-14	12 weeks.....	School committees and boards of education.	Fine of not more than \$10 for first and \$20 for each subsequent offense.
New Jersey	7-12	20 weeks.....	Police and constables ..	Fine of not less than \$10 for first and not more than \$25 for each subsequent offense, or imprisonment 1 to 3 months.
New Mexico.....	8-16	3 months	School directors.....	Fine of \$1 to \$25, or imprisonment 10 days in county jail.
New York.....	8-14	14 weeks.....	Trustees of school districts, presidents of union schools, or officers designated by boards of education.	Fine of \$1 for first offense, and after that \$5 for each week's failure.

a 8-15 in cities and towns where opportunity is given for industrial education.

ance in the United States.

view, September, 1892.]

Custody of truants.	Provision for poor children.	Under what age is employment during school hours absolutely forbidden?	Between what ages is schooling required preliminary to employment?	Amount of such schooling.	Requirements of non-public schools.
.....	Clothing.....	.....	Under 14	12 weeks each year.	Competent instructors.
Institutions of instruction or correction, or State reform school.	.....	13	13-14	12 weeks preceding year.	Hours, terms, and studies to be same as in public schools and teaching in English language.
.....	Free text-books	.....	.....	.....	.....
To be returned to the proper school.	.....	.....	.....	.....	Must teach in English language, reading, writing, arithmetic, U. S. history, and geography.
.....	Excused from attendance.	.....	.....	.....	Competent instructors.
State reform school.	.....	12	Under 15	16 weeks preceding year.	.....
Institutions of instruction and county truant schools.	.....	13	13-16	20 weeks preceding year.	Teaching must be in English language, and equal in thoroughness and efficiency to that of public schools.
Truant schools	Free text-books	.....	3-14	4 months preceding year.	Must teach such branches as are usually taught in the public schools.
.....	Excused from attendance.	.....	.....	.....	Competent instructors.
.....	Excused from attendance.	.....	.....	.....	Competent instructors.
.....	Free text-books	.....	.....	.....	.....
State reform schools.	.....	13	13-16	For children under 16, 12 weeks; under 14, 6 months; or whole time school was kept; under 12, whole time kept.	.....
Juvenile reformatories.	.....	12 boy 14 girl.	Under 15	12 weeks preceding year.	.....
.....	Free text-books	.....	.....	.....	.....
Institutions designated by school officers.	Free text-books	13	13-14	14 weeks preceding year.	Must teach spelling, reading, writing, geography, English grammar, and arithmetic.

Laws relating to school attend-

[From the Educational Re-

States and Territories.	Compulsory age.	Amount of required attendance in each year.	Officers charged with enforcement of the law.	Penalty on parents or guardians.
North Dakota	8-14	12 weeks.....	Presidents of school boards and boards of education.	Fine of \$5 to \$20 for first and \$10 to \$50 for each subsequent offense.
Ohio	<i>a</i> 8-14	20 weeks in cities, 16 in country districts.	Truant officers.....	Fine of \$5 to \$20
Oregon	8-14	12 weeks.....	Directors and clerk of school districts.	Fine of \$5 to \$25 for first and \$25 to \$50 for each subsequent offense.
Rhode Island.....	7-15	12 weeks.....	Truant officers appointed by town or city government.	Fine of not more than \$20.
South Dakota	8-14	12 weeks.....	Presidents of school boards.	Fine of \$10 to \$20
Utah	10-14	16 weeks.....	School trustees and presidents of boards of education to inquire into causes of neglect of duty.	Fine of not more than \$10 for first and \$50 for each subsequent offense.
Vermont.....	8-14	20 weeks.....	.....	.....
Washington	8-15	3 months .....	.....	Fine of \$10 to \$25.
Wisconsin	7-13	12 weeks.....	School directors, presidents of boards of education, or truant officers appointed by such boards.	Fine of \$3 to \$20
Wyoming	7-16	3 months	County superintendents of schools.	Fine of not more than \$25 for each offense.

a 8-16 when not employed.

ance in the United States.

view, September, 1892.]

Custody of truants.	Provision for poor children.	Under what age is employment during school hours absolutely forbidden.	Between what ages is schooling required preliminary to employment.	Amount of such schooling.	Requirements of non-public schools.
Juvenile reformatories.	Free text-books and clothing.	12	8-14 Under 14	12 weeks preceding year. 20 weeks in cities, 16 in country districts.	Must teach branches usually taught in public schools.
Confinement, discipline, and instruction.		10	10-15 8-14	12 weeks preceding year. 12 weeks in same year.	Must teach such branches as are usually taught in primary schools. Teaching must be in English language.
Schools designated by parents or guardians.		10 12	10-14	20 weeks preceding year.	

GROWTH OF THE COMMON SCHOOL SYSTEM.

The following tables exhibit to some extent the progress of the common schools of the United States since 1870:

Year.	Population.	Total number of pupils.	Average daily attendance.	Number of school-houses.	Value of school property.
1870.....	38,558,371	6,871,522	4,077,347	116,312	\$130,383,008
1871.....	39,500,500	7,561,582	4,545,317	132,119	143,818,703
1872.....	40,477,000	7,815,306	4,658,844	140,167	159,406,374
1873.....	41,490,442	8,003,614	4,745,459	145,863	173,077,552
1874.....	42,570,731	8,444,251	5,050,840	150,534	183,101,193
1875.....	43,700,554	8,785,678	5,248,114	157,364	192,013,666
1876.....	44,881,700	8,869,115	5,291,376	159,533	201,592,171
1877.....	46,112,700	9,965,006	5,426,595	163,694	198,534,584
1878.....	47,397,151	9,438,883	5,783,065	169,493	203,258,664
1879.....	48,744,700	9,594,458	5,876,077	171,613	205,913,196
1880.....	50,155,733	9,867,505	6,144,143	178,222	209,571,718
1881.....	51,274,900	10,000,896	6,145,932	183,452	217,505,356
1882.....	52,441,700	10,211,578	6,331,242	185,884	223,424,448
1883.....	53,654,100	10,651,828	6,632,392	193,147	237,140,889
1884.....	54,919,253	10,982,364	7,055,696	199,479	245,457,741
1885.....	56,221,868	11,398,024	7,297,529	205,315	263,668,596
1886.....	57,447,100	11,664,460	7,626,351	208,777	275,809,020
1887.....	58,712,678	11,884,944	7,681,806	213,737	290,384,522
1888.....	59,935,709	12,182,600	7,906,986	216,399	301,425,928
1889.....	61,148,714	12,392,260	8,005,969	221,284	321,561,176
1890.....	62,622,250	12,722,581	8,153,635	224,526	342,876,494
1891*.....	63,521,196	12,966,061	8,329,234	226,884	.....

Year.	Number of teachers.			Paid for salaries of superintendents and teachers.	Total expenditure.
	Male.	Female.	Total.		
1870.....	77,529	122,986	200,515	\$37,832,566	\$63,396,666
1871.....	90,293	129,932	220,225	42,580,853	69,107,612
1872.....	94,892	134,929	229,821	45,935,681	74,234,476
1873.....	97,790	139,723	237,513	47,932,050	76,238,464
1874.....	103,465	144,982	248,447	50,785,656	80,054,286
1875.....	108,791	149,074	257,865	54,722,250	83,504,007
1876.....	109,780	149,898	259,618	55,358,166	83,082,578
1877.....	114,312	152,738	267,050	54,903,776	79,439,826
1878.....	119,404	157,743	277,147	56,155,133	79,083,260
1879.....	121,490	158,840	280,330	54,639,731	76,192,375
1880.....	122,795	163,798	286,593	55,942,972	78,094,687
1881.....	122,511	171,349	293,860	58,012,463	83,642,964
1882.....	118,892	180,186	299,079	60,594,933	88,990,466
1883.....	116,388	168,001	304,389	64,798,859	96,750,003
1884.....	118,905	195,110	314,015	68,384,275	103,212,837
1885.....	121,762	204,154	325,916	72,878,993	110,328,375
1886.....	123,792	207,601	331,393	76,270,434	113,322,545
1887.....	127,093	212,367	339,460	78,639,964	115,783,890
1888.....	126,240	220,894	347,134	83,022,562	124,244,911
1889.....	124,467	232,110	356,577	87,568,306	132,539,783
1890.....	125,525	238,397	363,922	91,836,484	140,566,715
1891*.....	124,449	244,342	368,791	95,791,630	146,800,163

* The figures for 1891 are subject to future correction.

LENGTH OF SCHOOL TERM.

Average number of days the common schools were actually kept.

Year.	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.
	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>
1870.....	132.2	148.9	109.2	82.5	129.9	119.9
1871.....	132.1	152.0	97.4	91.6	132.9	119.2
1872.....	133.4	151.9	103.4	97.7	136.1	121.8
1873.....	129.1	154.6	97.4	89.1	129.6	118.3
1874.....	128.8	154.8	95.6	81.1	132.6	119.0
1875.....	130.4	158.7	95.2	81.0	134.6	132.5
1876.....	133.1	158.0	95.6	82.5	139.1	130.3
1877.....	132.1	157.2	91.4	80.3	139.8	130.1
1878.....	132.0	157.6	89.7	86.7	140.1	129.9
1879.....	130.2	160.1	88.6	81.9	136.4	132.0
1880.....	130.3	159.2	92.4	79.2	139.8	129.2
1881.....	130.1	158.7	92.4	82.1	138.8	133.8
1882.....	131.2	160.6	95.9	82.5	137.1	136.2
1883.....	129.8	161.0	95.9	82.5	137.1	132.6
1884.....	129.1	156.0	95.6	85.9	138.6	133.8
1885.....	130.7	163.1	93.4	87.5	139.1	131.8
1886.....	130.4	161.6	93.4	86.9	140.4	130.8
1887.....	131.3	165.9	95.3	87.5	139.5	131.6
1888.....	132.3	164.4	95.7	87.6	144.0	130.7
1889.....	133.7	164.1	95.0	88.9	147.5	135.7
1890.....	134.7	166.6	99.9	88.2	148.0	135.0
1891.....	135.7	168.0	99.9	95.0	146.7	133.8

The total school expenditure compared with the total population and with the average attendance.

Year.	Expended for common schools per capita of the population.						Expended for common schools per pupil.					
	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.
1870.....	\$1.64	\$2.31	\$0.47	\$0.48	\$2.09	\$2.02	\$15.55	\$17.82	\$12.68	\$9.44	\$14.68	\$22.25
1871.....	1.75	2.38	.63	.73	2.14	2.15	15.20	18.31	10.27	9.06	14.87	21.87
1872.....	1.83	2.40	.68	.81	2.31	2.27	15.93	18.87	10.47	9.08	16.36	23.57
1873.....	1.84	2.44	.68	.74	2.31	2.42	16.06	19.90	9.25	8.39	16.53	25.04
1874.....	1.83	2.51	.76	.68	2.33	2.40	15.85	19.90	9.00	7.55	16.57	24.36
1875.....	1.91	2.55	.80	.73	2.36	1.76	15.91	20.17	8.98	7.51	16.69	26.85
1876.....	1.85	2.45	.79	.55	2.37	2.78	15.70	19.15	8.65	6.70	16.91	26.35
1877.....	1.72	2.29	.72	.51	2.21	2.61	14.64	17.89	7.68	6.25	15.93	24.69
1878.....	1.67	2.15	.70	.56	2.14	2.73	13.68	16.55	7.21	5.98	15.08	25.82
1879.....	1.56	2.03	.63	.55	2.00	2.53	12.97	16.05	6.76	5.65	14.22	23.39
1880.....	1.56	1.97	.68	.55	2.03	2.41	12.71	15.64	6.69	5.40	14.39	22.59
1881.....	1.63	2.03	.72	.58	2.09	2.54	13.61	17.14	7.22	5.71	15.19	23.81
1882.....	1.70	2.11	.78	.64	2.19	2.59	14.05	17.35	7.63	6.25	15.80	24.32
1883.....	1.80	2.22	.82	.68	2.34	2.74	14.55	18.17	7.46	6.17	16.69	25.39
1884.....	1.88	2.25	.84	.74	2.48	2.83	14.63	18.37	7.44	6.26	16.90	24.69
1885.....	1.96	2.38	.88	.82	2.53	2.90	15.12	19.19	7.32	6.74	17.53	26.31
1886.....	1.97	2.36	.88	.87	2.54	2.88	15.06	19.11	7.33	6.93	17.45	25.52
1887.....	1.97	2.35	.90	.87	2.55	2.76	15.07	19.38	7.33	6.88	17.45	24.85
1888.....	2.07	2.43	.95	.87	2.68	2.96	15.71	20.60	7.61	6.60	18.29	27.38
1889.....	2.17	2.50	.98	.94	2.76	3.23	16.55	21.64	7.77	7.12	19.30	29.37
1890.....	2.24	2.76	.99	.97	2.81	3.37	17.23	23.58	7.78	7.28	19.70	30.57
1891.....	2.31	2.78	1.03	1.04	2.87	3.80	17.62	23.65	8.25	7.59	19.96	34.03

GENERAL SUMMARY OF PUPILS ENROLLED IN SCHOOLS OF ALL GRADES DURING THE SCHOOL YEAR 1890-'91.

The following table (pp. 43-44) shows the whole number of pupils of each grade enrolled in the public and private schools of the United States during the school year 1890-'91.*

According to the table there were enrolled a grand total of 14,669,069 pupils, being 23.09 per cent of the population, or nearly one-fourth.

Grade of pupils.—Of the total number of pupils, 14,146,663, or 96.4 per cent, were receiving elementary instruction (primary and grammar grades); 370,435, or 2.6 per cent, were receiving secondary instruction (high school grade); and 151,971, or 1.0 per cent, were receiving higher instruction.

The following table shows more in detail the proportion of pupils in each grade.

Per cent of pupils in each grade..

	Elementary.	Secondary.	Higher.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
The United States	96.4	2.6	1.0
North Atlantic Division	95.4	3.2	1.4
South Atlantic Division	97.3	1.8	0.9
South Central Division	97.6	1.6	0.8
North Central Division	96.3	2.7	1.0
Western Division	96.2	3.0	0.8

Only 1 pupil in every 40 is under secondary instruction and 1 in 97 under higher instruction; 964 out of every 1,000 pupils are below the high school. This emphasizes the fact that the great multitude of children receive in the elementary schools all the school education they ever get.

The greatest proportion of secondary and higher students is found in the North. In the North Atlantic States 3.2 per cent of the whole enrollment, or 1 in 31, are under secondary instruction; in the South Central States only 1.6 per cent, or 1 in 63, about one-half the proportion of the former group.

The North Atlantic States also lead in the higher instruction, having 1.4 per cent of the total enrollment, or 1 in 73, under higher instruction; the South Central and Pacific States have 0.8 per cent under higher instruction, or about 1 in 130 of the whole number of pupils.

The figures of secondary and higher instruction have been made up from the reports of individual institutions (high schools, private secondary schools, colleges, etc.) to the Bureau; the students in these schools have been carefully classified, all the strictly elementary pu-

*Excluding evening schools; art, industrial training, trades, and private business schools; schools for the defective, dependent, and delinquent classes, and Indian schools. These collectively enroll a considerable number of pupils.

pils being so classed, and those in the preparatory departments of colleges being classed as secondary. It is probable that the number of secondary pupils is considerably understated, especially in public schools; there are many pupils pursuing secondary studies in ungraded or partially graded public schools who were not reached by the Bureau.

Per cent of public and private pupils.—Public schools and institutions enrolled 13,023,406 pupils in 1890-'91, or 88.8 per cent of the total enrollment; private schools and institutions enrolled 1,645,663, or 11.2 per cent of the total.

Eight-ninths of all the education in the United States is therefore public. The following table gives the proportion of public and private, classified by grade and locality:

Per cent of pupils in each grade attending public and private schools.

	Elementary.		Secondary.		Higher.		All grades.	
	Public.	Private.	Public.	Private.	Public.	Private.	Public.	Private.
United States.....	90.2	9.8	60.2	39.8	30.3	69.7	88.8	11.2
North Atlantic Division...	84.9	15.1	65.3	34.7	33.8	66.2	83.6	16.4
South Atlantic Division....	93.2	6.8	35.5	64.5	21.2	78.8	91.5	8.5
South Central Division....	93.0	7.0	31.6	68.4	22.1	77.9	91.5	8.5
North Central Division....	91.1	8.9	70.6	29.4	31.4	68.6	89.9	10.1
Western Division.....	91.5	8.5	51.8	48.2	51.7	48.3	90.0	10.0

It will be seen that about nine-tenths of all elementary education is public, six-tenths of secondary education, and only three-tenths of higher education. The higher the grade, therefore, the more completely is education confined to private enterprise.

In the elementary grade, the largest proportion of private pupils is found in the North Atlantic States; more than one-seventh (15.1 per cent) of all the elementary pupils in that section are in private schools, about double the proportion that is found elsewhere. It is proper to state, however, that the statistics of private elementary education are very incomplete and fragmentary, even in those States that have made the greatest effort to gather information on this subject.

Of secondary pupils, the South has the largest proportion of private, *i. e.*, about two-thirds. This is an outgrowth or survival of ante-bellum conditions, when nearly all secondary education in the South was conducted in private schools. In the North Central States, on the other hand, where the establishment of public high schools was a part of the settled educational policy from the beginning, less than three-tenths (29.4 per cent) of the secondary education is given in private schools.

In the South, also, the largest proportion of private higher education is found, only about one-fifth there of the higher education being given in public schools and institutions. In the States and Territories of the

western division, on the contrary, over one-half (51.7 per cent) of the higher education is public.

It must be stated that there is no well-defined line separating public from private higher institutions. In some of the institutions considered as public the State merely gives some pecuniary aid, perhaps with a representation on the governing board.

A large part of the public higher education is given in normal schools, as will be seen from the detailed table. Deducting these there remain in other professional schools (law, medicine, technology, etc.) and in colleges of the liberal arts the following proportion of public and private students:

Higher education, excluding normal schools.

	Public.	Private.
	<i>Per cent.</i>	<i>Per cent.</i>
The United States	13.0	87.0
North Atlantic Division.....	6.0	94.0
South-Atlantic Division.....	10.2	89.8
South Central Division.....	11.7	88.3
North Central Division.....	19.7	80.3
Western Division.....	34.1	65.9

Without counting in normal education, then, which is peculiarly a State interest, only 13 per cent, or about one-eighth, of the higher education is given in public institutions. In the North Atlantic States the proportion is particularly small, being only 6 per cent, and even this might be reduced by a more rigid classification.

Actual relation of school enrollment to population.—The percentage columns of the following table give the proportion of the population enrolled in schools of different kinds.

Elementary schools enrolled 22.27 per cent of the population, or about 1 person in $4\frac{1}{2}$; secondary schools, 0.53 per cent, or 1 in 171; higher institutions, 0.24 per cent, or 1 in 418.

Total number of pupils and students of each grade, in both public and private schools.

NOTE.—The classification of States made use of in the following table is the same as that adopted by the United States Census, and is as follows: *North Atlantic Division:* Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. *South Atlantic Division:* Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida. *South Central Division:* Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Arkansas, and Oklahoma. *North Central Division:* Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. *Western Division:* Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, and California.

	Students under higher instruction.												
	Pupils receiving elementary instruction ("primary" and "grammar" grades).		Pupils receiving secondary instruction ("high school" grade). <i>a</i>		In universities and colleges (for men exclusively and coeducational). <i>c</i>		In normal schools. <i>e</i>			In agricultural and mechanical colleges (public). <i>g</i>	In schools of medicine, law, theology, and technology (private).		
	Public.	Private (largely estimated).	Public. <i>b</i>	Private (in preparatory schools, academies, seminaries, etc.).	Public. <i>d</i>	Private.	Total.	In colleges for women only (private).	In normal schools. <i>f</i>				
									Public.			Private.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
The United States.....	12,754,463	1,392,200	222,868	147,567	7,880	42,518	50,398	12,117	31,792	10,515	42,307	6,403	40,746
North Atlantic Division.....	3,060,214	545,200	80,037	42,419	415	14,890	15,305	2,723	15,240	242	15,482	1,734	16,244
South Atlantic Division.....	1,865,544	132,100	12,405	22,513	798	4,514	5,312	3,709	2,223	483	2,706	744	5,317
South Central Division.....	2,398,712	179,200	13,324	28,836	835	6,980	7,815	4,272	2,566	776	3,342	1,252	4,349
North Central Division.....	4,942,793	485,100	107,435	44,787	5,009	15,063	20,072	1,379	10,432	8,850	19,282	2,432	13,845
Western Division.....	547,200	50,600	9,667	8,982	823	1,071	1,894	34	1,331	164	1,495	261	991

a Including pupils in preparatory or academic departments of higher institutions, public and private, and excluding elementary pupils, who are classed in cols. 2 and 3.

b This is made up chiefly from the returns of individual high schools to the Bureau, and is considerably too small, as there are a great many secondary pupils outside the completely organized high schools whom there are no means of enumerating. The whole number of pupils studying secondary branches in public schools is probably near 500,000.

c Excluding pupils in professional schools and departments, who are included in column 14.

d Mainly State universities.

e Nonprofessional pupils in normal schools are included in columns 4 and 5.

f Private normal schools are, with one or two exceptions, scarcely superior to the ordinary secondary schools.

g These figures do not include all the pupils who are beneficiaries of the land-grant act. The statistics of some of the land-grant schools can not be separated from the general statistics of the colleges or universities of which they are departments.

Total number of pupils and students of each grade, in both public and private schools—Continued.

	Summary of higher instruction.		Summary of pupils by grade.						Summary—Public and private.				Grand total.	
			Elementary.		Secondary.		Higher.		Public.		Private.			
	Public.	Private.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.
I	15	16	17	18	19	20	21	22	23	24	25	26	27	28
The United States	46,075	105,896	14,146,663	22.27	370,435	0.58	151,971	0.24	13,023,406	20.50	1,645,663	2.59	14,669,069	23.09
North Atlantic Division	17,389	34,099	3,605,414	20.43	122,486	0.69	51,488	0.29	3,157,640	17.89	621,748	3.52	3,779,388	21.41
South Atlantic Division	3,705	14,023	1,937,644	21.59	34,918	0.39	17,788	0.20	1,821,714	20.30	168,636	1.88	1,990,350	22.18
South Central Division	4,633	16,377	2,577,912	23.22	42,160	0.38	21,010	0.18	2,416,669	21.76	224,413	2.02	2,641,082	23.78
North Central Division	17,873	39,137	5,427,893	23.39	152,222	0.67	57,019	0.26	5,068,101	22.41	569,024	2.51	5,637,125	24.92
Western Division.....	2,415	2,200	597,800	18.90	18,649	0.59	4,675	0.15	559,282	17.68	61,842	1.96	621,124	19.64

CHAPTER II.

SECONDARY EDUCATION IN NEW ZEALAND.

By Sir ROBERT STOUT, K. C. M. G.,

Formerly minister of education and premier of the colony.

Col. Higginson, in his *Atlantic Essays*, has said: "But as the value of a nation to the human race does not depend upon its wealth or numbers, so it does not depend even upon the distribution of elementary knowledge, but upon the high-water mark of its educated mind."

If, therefore, New Zealand had only provided a free elementary education, it would have failed in its duty. Though it is a young nation, having just celebrated its jubilee, and has only a population of 686,651 persons, it has done something for culture. To understand, however, its position in reference to secondary schools, it will be necessary to state briefly what the Government provision has been for elementary education and how far that education extends.

The colony has a system of free, compulsory, and secular education. The whole cost of the schools, buildings, staff, maintenance, everything, is paid out of the general revenue of the colony. There are no local rates nor local contributions. It is true that the committees that have the control of the schools may raise, by voluntary subscription, small sums to give little adjuncts to the ordinary school buildings or playgrounds, but further than this nothing is done by local districts to bear the cost of education. The colony is divided into thirteen education districts, and these districts are again divided into school districts. There is generally only one school in a district but there may be more. The committees are selected by the householders and parents in the various school districts, and the committees elect the boards. The committees consist of 5, 7, or 9 persons, according to the number of children in the district, whilst the boards consist of 9 members holding office for three years, three retiring annually. The school committees are annually elected. There is also a minister of education, with a small staff. He, however, only controls and directs; he does not administer the act. The main part of administration falls upon the boards. They appoint inspectors and teachers, and they dismiss teachers. The appointments or dismissals, however, are only made after consulting the committee. They erect buildings and look after education

generally. The committees attend to what may be termed the local wants of the school and advise the board as to teachers, and they conduct affairs generally in the school district.

The sum spent last year on primary education by grants to boards was £407,494 18s. 11d. There was other expenditure in the department, including the cost of administration, the total education vote being, including £34,617 11s. 2d. from reserves, £446,642 3s. 7d. There are 1,272 state primary schools in the colony, and 3,065 teachers. There are various church and private schools, but as these are not aided nor inspected by the State I omit the statistics referring to them. The teachers are graded and hold their certificate from the minister of education. There are nine ranks as follows:

A 1	-----	-----	-----	-----	1st rank.
A 2	B 1	-----	-----	-----	2d rank.
A 3	B 2	C 1	-----	-----	3d rank.
A 4	B 3	C 2	D 1	-----	4th rank.
A 5	B 4	C 3	D 2	E 1	5th rank.
	B 5	C 4	D 3	E 2	6th rank.
		C 5	D 4	E 3	7th rank.
			D 5	E 4	8th rank.
				E 5	9th rank.

The letters denote scholarship, while the figures denote success in practical teaching. No one can get the highest grade unless he is an M. A., with first or second class honors of some university recognized by the department. No one can get a B rank unless he is a B. A., and no one can get a C rank unless he has passed a certain examination equivalent at least to half of a graduate's degree. The children are admitted at 5 and may be kept at school till 15. The compulsory age, however, is 7 to 13. In order to show what is taught in elementary schools it will only be necessary to copy the sixth and highest standard. It is:

STANDARD VI.

1. *Pass subjects.*

Reading.—A book containing extracts from general literature; spelling and dictation suited to this stage.

Writing.—The copying of tabulated matter showing bold head lines and marking distinctions, such as in letter-press require varieties of type (*e. g.*, the copying of these printed standards or of a catalogue showing division into groups).

Arithmetic.—Vulgar and decimal fractions; interest and other commercial rules, such as discount, stocks, partnership, and exchange; the metric system of weights and measures, and calculations with pound, florin, cent, and mill; square root and simple cases of mensuration of surfaces; mental arithmetic generally.

Composition.—Essay or letter.

Geography.—The maps of Asia and North America. Work analogous to the work prescribed under the head of "Map of Europe" for Standard V. The map of the world; British possessions, their principal towns and leading products, with some knowledge of their relative importance and of the forms of government of the most important. Physical geography: The principal causes of difference of climate, with illustrations.

Drawing.—Elementary solid geometry and free hand drawing from simple models. Free hand to be kept up. All copies made from the flat must be enlarged or reduced, and the free-hand drawing must include drawing from simple models, the models being the same simple solids as are prescribed for the geometrical drawing of this standard, and combinations of the same as found in simple common objects, such as tables, boxes, books, bottles, buckets, etc. The model drawing and the method of teaching it are fully illustrated in the first grade model drawing in the Colonial drawing book issued by authority of the minister of education. The work in practical solid geometry is as follows: Plans and elevations of the sphere and cube, the cone and pyramid, the cylinder and prism, and slabs. Pupils must be able to give correct definitions of these solids and to draw plans and elevations of them, and of simple objects based on them, on three planes of projection, and also to draw sections of them in any plane perpendicular to the horizontal or to the vertical plane.

2. Class subjects.

Grammar.—Complete parsing (including syntax) of simple and compound sentences (easy); prefixes and affixes, and a few of the more important Latin and Greek roots, illustrated by part of the reading book; analysis of easy complex sentences.

English History.—The period from the death of Elizabeth to the reign of Victoria; also the elements of social economy; that is to say, very elementary knowledge of such subjects as government, law, citizenship, labor, capital, money, and banking. The pupils will not be required to learn more than about a dozen dates or to answer questions on more than about 25 persons and events for any one standard; nor will they be expected to trace the remote causes or even to remember the proximate causes of great events. What is wanted is a clear view of a few prominent persons and salient facts so exhibited as to afford glimpses of the conditions in which our ancestors lived at successive periods of our national history and to establish in the mind an outline that may be filled in by later reading. A child may have a vivid idea of royal authority prone to excess and of the status of a baron and of the political insignificance of the common people at the beginning of the thirteenth century without knowing the contents of Magna Charta or all the incidents of feudal tenure.

Elementary science.—The instruction in elementary science shall be based on a programme prepared by the head teacher, to show the distribution of the subject over a three-years' course of lessons. The programme must include such elementary knowledge of physics and such a conception of chemical action as may be imparted by the proper use of Prof. Bickerton's Materials for Lessons in Elementary Science, and must also include instruction in elementary mechanics, or in such elementary physiology as may be learned from Mrs. Buckton's Health in the House, or in botany, or in some other subject recognized by the inspector as equivalent to one of these; provided, however, that if the elements of agricultural knowledge be efficiently taught no other elementary science shall be required for this standard.

The programme of the elements of agricultural knowledge which may be substituted for the programme of elementary science is as follows:

(a) Object of manuring. General and special manures. Farmyard manure, its composition and value; its liability to ferment; management to prevent loss of value. Vegetable and animal refuse as manures. Green manuring. Plant food most frequently wanting in soils. Manures supplying particular kinds of plant food. Guanos. Special manures supplying nitrogen. Bone manures. Superphosphate and other mineral manures. Action of lime on the soil.

(b) The characteristics of the commoner crops, cereals, fodder crops, root crop. Habit of growth of a plant. Distribution of roots. Principle of adaptation of manures to crops.

(c) Importance of good seed. Propagation of plants by cuttings, tubers, bulbs, etc. Objects of grafting and pruning. Insect pests. Insect changes, as illustrated by the life history of common insects. Nature of parasitic fungi.

All the girls in any public school in which there is a mistress or assistant mistress shall learn needlework, and the inspector shall judge all other work done by the girls more leniently than that done by the boys in such a degree as would be implied in reducing by 10 per cent the minimum marks required for any examination pass. To secure full approval the needlework of the several classes must be according to the following programme:

Cutting out any plain garment and fixing it for a junior class; darning stockings (fine and coarse) in worsted or cotton; grafting; darning fine linen or calico; patching the same; darning and patching fine diaper.

If knitting is learned it shall be in the following order: A strip of plain knitting; knitted muffatees, ribbed; a plain knitted child's sock; a long ribbed stocking.

Additional subjects.

Recitation.—A list of pieces learnt, and one piece (or more) specially prepared for the examination.

Singing.—Easy exercise on the chords of the dominant and subdominant; exercises in triple time; use of dotted notes; melodies, rounds, and part songs, in common with the higher standards.

This system was inaugurated in 1877. Previous to that year there had been different systems in different provincial districts, for since the year 1853 down to the end of 1876 there existed in New Zealand a modified federal form of government called the Provincial system. There were originally six provinces, but these were ultimately enlarged to nine, and it may be well to give the kind of education in existence under the Provincial system. It was as follows:

Province.	Nature of education.	How controlled.	Rates in aid.	Religious instruction.	Fees, etc.
Auckland	Secular...	Board and local committees.	20s. per householder; 10s. per nonhouseholder.	Prohibited during school hours.	Capitation rate of 10s. per child.
Canterbury....	Mixed....	Superintendent and local committees.	20s. per householder.	During school hours, but only at request of parents.	5s. per quarter.
Hawkes Bay...	Secular...	.....	10 per cent on buildings; tax of £1 on single men in receipt of £100 per annum.	Prohibited during school hours.	1s. 6d. per week.
Marlborough ..	....do....	Board and committees.	Rate of, from ½d. to 3d. in pounds on buildings.	....do	From 1s. 6d. to 15s. per quarter.
Nelson.....	Mixed....	Board and local committees.	20s. per householder.	In school hours; children of objecting parents to be allowed to withdraw.	Capitation rate of 5s. per child.
Otago.....	....do....	Superintendent and his executive and local committees.	Grants in aid from provincial council.	Bible read at opening of school.	Varying fees, as levied by board.
Taranaki	Undet'd.	Board and local committees.	20s. per householder.	Not provided for.	6s. 6d. per quarter.
Wellington....	Mixed....	Board and local managers.	½d. in the pound on land or buildings.	Same as Nelson.	5s. per quarter.
Westland.....	....do....	Board and local committees.	10s. to 30s. per householder.	Given before or after school hours.	Capitation rate of 10s. per child.

The board generally consisted of the superintendent and his executive, that was the governor of federal state or province. Aids to private schools were given in Hawkes Bay, Nelson, Marlborough, Taranaki, Wellington, and Westland.

The provinces, however, were abolished, and education was made colonial, and the system above mentioned was adopted. There was, however, no provision in the new colonial act for higher education except what was called district high schools, which provided for the following:

The education board of any district on receiving an application in writing from the committee may, with the express sanction of the minister previously obtained, convert any public school in the district into and establish the same as a district high school.

Every such district high school shall be under the charge of a head master and such number of duly qualified masters and assistants as the board shall from time to time consider necessary.

All the branches of a liberal education, comprising Latin and Greek classics, French, and other modern languages, mathematics, and such other branches of science as the advancement of the colony and the increase of the population may from time to time require, may be taught in such school. For such higher education, fees shall be paid by the pupils at such rates as shall be fixed by regulations.

In every district high school instruction shall also be given in the ordinary branches of education prescribed by this act to be given in public schools.

It was thought necessary to incorporate some of the secondary schools that had been managed by provincial boards.

As each school is dealt with its mode of management will be mentioned. It will be seen that several of them are similar in their constitution; that is, they have a board appointed by different bodies, and they are *quasi* public schools. Two or three of the schools that will be mentioned are managed by church organizations, but give the higher secular instruction. A general system of education was, so to speak, laid down in 1877, amalgamating the various provincial systems that had been previously in existence, and prescribing a uniform mode of providing for elementary instruction. There has, however, not been as yet any general law for secondary schools. Some of those that now exist were founded far back in the early days of the colony, others are of more recent creation, but no general plan has been adopted for their management or for their endowment. Some have had land grants, some have had money endowments, some for a time had annual grants from parliament, and some mainly depend upon their fees.

There are 24 secondary schools under government inspection. There are also what are termed 6 district high schools; that is, elementary schools, with higher classes added to them and controlled by a rector.

It will be well to deal with each school separately, stating its constitution, its endowment, the subjects taught, the mode of paying the teachers, the staff, the buildings, etc. In doing this it will be wise to begin at the northern part of the colony, and at the same time it may be noted that the islands of New Zealand have a long seaboard stretching from 34° latitude south to 48° latitude south, and in such a range of latitude there is necessarily a great range of temperature. The climatic conditions vary considerably, the northern part being almost subtropical whilst the southern part is temperate. There is, however,

this to be remarked, that there is no severe winter. Snow is almost unknown except on the ranges or in the high lands in the interior. All along the seaboard, even the most southern, snow never lies. New Zealand has been termed by Mr. Fiske, the American writer, "the land of the spring time," and it is not an inapt name. In the far north, however, there is quite a warm enough summer.

To appreciate properly the standards and education of the secondary schools, reference must be made to the New Zealand University, for its entrance and scholarship examinations furnish the tests for secondary school work. A short description of the university teaching and examinations will appear further on.

AUCKLAND COLLEGE AND GRAMMAR SCHOOL.

Beginning in the northern district, there is the Auckland College and Grammar School. This institution was first established in 1850 by a grant of land made to trustees for a college and grammar school. The following principles were to be observed in conducting it: (1) The branches taught were to be the English language, mathematics, and Greek and Latin. (2) Evening classes were to be maintained in connection with the schools. (3) Persons of all races were to be admitted on equal terms. (4) Free scholars were to be maintained so far as the fund permitted. The foundation deed gave certain lands as endowments, and in the year 1891 the total rents obtained from landed property amounted to £2,676 17s. 6d. Three hundred pounds was received from reserves for the girls' school in addition. The school was created a corporation by an act of the general assembly in 1877.

The following is a short history of the school:

Foundation.—In the year 1852 his excellency Sir George Grey, as governor of the colony, set apart certain endowments for the foundation and maintenance of a grammar school or schools in Auckland. In 1854 these endowments passed into the hands of the provincial government. In 1868 a board of governors was constituted and empowered to employ a portion of the endowments in starting the school. The sum made available having been found insufficient, a subsequent act authorized the board to deal with the whole endowment and accumulations, and provided a site with an old building upon it. In this building the school was opened on May 17, 1869, by his royal highness the Duke of Edinburgh, and his excellency Sir George Bowen, the governor of the colony. More than ten years, however, elapsed before it found a permanent home in a building erected for the purpose. In the meantime it had changed its quarters more than once and had for a time been dispersed among two or three small buildings.

Governing body.—The first board of governors mentioned above consisted of the superintendent and executive of the Auckland province, the speaker of the provincial council, and three members elected by that body. In 1876, on the passing of the education boards act, the school was handed over to the Auckland board of education, but in the following year an act provided a special board consisting of three members elected by the members of the legislative assembly, resident in the Auckland province, three elected by the Auckland board of education, and one ex-officio member, namely, the mayor of Auckland. Subsequently three members representing the senate of the University of New Zealand were added.

Title.—The dual title of the school is a record of the fact that from 1871 to 1882 it was affiliated to the University of New Zealand. But the establishment of the Auck-

land University College having removed the necessity for such a connection, disaffiliation was sought and obtained. The title, however, was not changed.

Head masters.—The first head master was the Rev. Robert Kidd, LL. D., of Trinity College, Dublin. He was succeeded after two years by Farquhar Macrae, esq., who held office until 1881, when it was resolved to obtain from England a graduate in honors of Oxford or Cambridge. J. A. Sloman, esq., B. A. (Sydney) was appointed to act as head master during the interregnum. In January, 1882, the present head master, C. A. Bourne, esq., M. A., sometime exhibitor and scholar of St. John's College, Oxford, was elected by a board of four commissioners, of whom the Rev. Dr. Jowett, master of Balliol College, Oxford, was chairman.

Provision for the reception of boarders.—It was understood when the school was founded that the wants of the country districts should be, as far as possible, met by the provision of a schoolhouse for the reception of boarders, but though the governors have from time to time had this subject under consideration, and on one occasion actually resolved on the erection of a school house, and had designs prepared, this important addition is still wanting.

Girls' side.—Until September, 1888, the benefits of the school were confined to boys. Claims had indeed been put forward on behalf of the secondary education of girls, but it was clear that such an application of the endowment had not been originally contemplated, and it was at least doubtful whether it would be legal. Moreover, the board of governors were carrying on a girls' high school, receiving an annual subsidy from the legislature for the purpose. But in the year mentioned this grant was withdrawn, and the school was closed in consequence. To meet this emergency, the girls' side was opened. The arrangement, which was intended to be temporary, has now continued for four years. The two sides are carried on in the same building, but are kept separate in work and in play. The head master is in charge of both, and he and other masters take part in the instruction of the higher classes on the girls' side.

Curriculum.—The principal subjects of instruction are Latin, French, mathematics, various branches of natural and physical science, English history, geography, drawing (freehand, mechanical, and geometrical); reading and writing, bookkeeping, and mensuration are also taught, chiefly as alternative for Latin, which is optional. For Greek there is no appreciable demand, otherwise it would be taught. German and, for girls' class, singing are taught out of school, but without extra fee. Drill and gymnastics are taught to the younger scholars in school hours, to the older in the midday interval. The workshop, for attendance at which a small fee is charged, is very popular. Boys often construct in it models of engineering works from drawings made in the drawing school. For girls, the course is somewhat modified, but it is on the whole very similar.

Recreations.—Cricket and football are carried on by the boys with considerable energy, though under difficulties arising from the facts that there are no boarders, that many of the scholars come from remote suburbs, and that the playground is unsuitable. Practice and match wickets are hired in the Auckland Domain, and, by kind permission of his excellency the governor and the government, a field attached to the Government house is used. There is a fives court for the boys; for the girls, two tennis lawns are being formed. Annual meetings are held by the boys, in the first term for swimming races, in the second for hare and hounds, in the third for athletic sports. A small orchestra meets for practice weekly, and every year a musical and dramatic entertainment is given.

Entrance.—Applicants for admission are required to pass an examination, and to produce certificates of good character from the school last attended.

Terms, etc.—There are three terms in the year, namely: One of fourteen, and two of thirteen weeks, with vacations of seven weeks in the summer, two weeks, and three weeks. An examination is held at the end of the year, prizes are awarded and promotions made on the result of the three examinations combined. Occasionally the examinations are conducted by examiners not connected with the school, but

appointed and paid by the governors. Saturday is a whole holiday; on other week days school is held, for boys from 9:15 to 12:15 and from 1:45 to 3:45; for girls morning school begins and ends five minutes later, afternoon school five minutes earlier.

Classification.—One classification serves for all subjects except mathematics, for which the pupils are redistributed. The classes on the girls' side are approximately parallel to those on the boys' side.

Age of pupils.—The ages of the pupils range from 8 to 19 years. Sometimes the latter limit is reached, but by far the larger number of pupils neither enter at or near the lower age nor stay until they approach the higher.

Numbers.—Like almost all colonial schools this school has been subject to great fluctuations in number. Shortly before Mr. Macrae ceased to be head master there were 240 boys, but the present head master found only 166. At the end of 1882 the number was the same; then it rose in a year and a half to 303, with 28 at a suburban preparatory school. A period of commercial depression ensued, and the number fell. In 1889 it was 137. Before that time, however, the girls' side had been opened. Starting with 76 pupils, it had steadily grown. The numbers at present (September, 1892) are boys, 145; girls, 131.

Staff.—There are at present on the regular staff 7 assistant masters and 3 mistresses working whole time, 1 master and 1 mistress working part time. All the assistant masters, except those for drawing and French, are graduates—1 of Oxford, 1 of Cambridge, 2 of New Zealand, 1 of Sydney, 1 of Melbourne; 1 of the mistresses is a graduate of New Zealand. For gymnastics and for the drawing classes on the girls' side visiting instructors attend.

Scholarships, etc.—The board of governors offers annually out of endowment three junior and three senior foundation scholarships. The former conferring free education, and, when necessary, cost of transit by rail in the first instance for one year, but with the prospect of renewal from year to year, so long as the board is satisfied that the scholar is deserving, are open to boys and girls under the age of 13 years. The latter conferring free education for one year and £20 are so arranged as to carry on boys and girls, who, having obtained distinction in the examination for the junior scholarships of the New Zealand University, and being young enough to compete again, desire to do so. The board also offers free education to the four candidates in each year who come next to the successful competitors for the board of education's junior district scholarships, and also to the four who take a like position in the examination for the senior district scholarships. These district scholarships, of which the junior, worth £20 or £30 per annum for three years, are open to boys and girls from primary schools under the age of 14 years; and the senior, worth £30 per annum also for three years, to boys and girls under the age of 16 years at the time of election, may be, and in most cases are, held in this school. Those already attending it can not, of course, compete for the junior scholarships, but are eligible for the senior, and, indeed, carry off most of them. Thus a boy or girl may obtain assistance all through his or her career at this school until the time comes for competing for a university scholarship. A local benefaction (the Rawling's trust) provides fees, books, and £5 per annum for four years for, at present, nine years.

There are at present 45 boys and 23 girls enjoying scholarships or free education in the school.

In the examination for junior university scholarships, the civil service, and other open examinations, this school has for many years past been very successful.

The work may be gathered from the highest class work, and the lowest class work, which is as follows:

BOYS.

Highest.—Latin, French, English, mathematics, chemistry, electricity, as for junior university scholarships.

Lowest.—Reading: Longman's Fourth Reader, the whole; repetition from Auch-

muty's Poems of English Heroism. Grammar: Davidson and Alcock's Intermediate, pp. 1 to 40. History: Blackwood's First Reader, the whole. Geography: Blackwood's First Reader, the whole. Object lessons.

GIRLS.

Highest.—The same as boys, except that heat is substituted for electricity.

Lowest.—Reading: Longman's Fourth Reader, the whole; repetition, passages from the reader. Grammar: Davidson and Alcock's Intermediate; noun, pronoun, adjective, adverb, preposition, conjunction, analysis, parsing. History: Blackwood's First Reader, the whole. Geography: Blackwood's Third Reader, the whole; outlines of New Zealand geography.

Scholarships were held at the school during the last quarter of 1890 as follows:

College scholarships.—Senior foundation (£20 and free education), 1 boy, 1 girl; junior foundation (free education), 9 boys, 2 girls; under education board's certificate of proficiency (free education), 5 boys, 5 girls; children of members of staff, 4 boys, 4 girls. The college also gave free education to some holders of education board scholarships.

Education board scholarships.—At £45, 2 girls; at £40, 6 boys; at £30, 7 boys, 1 girl; at £25, 5 boys, 3 girls; at £20, 9 boys, 7 girls.

Rawlings scholarships (free education and books).—Nine boys.

The success of the school in the university examinations for 1890–91 was as follows:

In the examination for university junior scholarships held in December, 1890, 3 pupils of this school obtained scholarships, viz, 2 male and 1 female; 6 passed with credit, viz, 4 male and 2 female. For matriculation, 9 passed, viz, 5 male and 4 female. In the examination for senior district scholarships, held by the Auckland board of education in December, 1890, scholarships were awarded to 7 pupils of this school, viz, 3 male and 4 female; and certificates of proficiency to 8 pupils, viz, 6 male and 2 female. At the civil service examinations held in January, 1891, in the senior examination 3 pupils of the school passed, viz, 2 male and 1 female; and 3 boys obtained partial passes. In the junior examination 10 pupils of the school passed, viz, 7 male and 3 female.

The school meets in rather a commodious building.

OTHER SCHOOLS IN THE AUCKLAND DISTRICT.

There is at the Thames, distant from Auckland 45 miles, a boys' and girls' high school. It is managed as follows:

A board of governors is appointed and is constituted a body corporate by the name of the Thames high school board.

The board consisted first of 7 persons nominated by the governor, but no member could hold office longer than a year, a retiring member being eligible for reëlection or renomination.

After the expiration of the first year the governor appointed three members; the Thames borough council appointed three other members, and the mayor for the time being of the borough of Thames was the other member.

The revenue received from reserves and gold fields last year amounted to £719 15s. 10d. The work of the highest class was that of the junior

university scholarship examination. Free education was granted to 27 scholars. There is no boarding establishment connected with either school. The pupils on the roll were: boys 29, girls 27.

There was also established in the city of Auckland a Church of England grammar school. It was founded by Bishop Selwyn in 1855. Little work, however, has been recently done by it. The grants given to the Roman Catholic Church have also not been utilized for higher education. The Wesleyan College at the Three Kings was once a high school, but it has become practically an English and Maori theological college for the Wesleyan ministry.

There is a high school situated at Whangarei, which lies in a fine harbor, 80 miles north of Auckland, and is becoming the seat of fruit culture. Oranges, lemons, and other subtropical fruits grow magnificently. It is managed by a board appointed as follows:

The board consists of 7 persons, 1 of whom is the chairman of the county council for the time being; 2 are appointed from time to time by the governors of the Auckland College and Grammar School; 2 are nominated and appointed from time to time by the governor, and 2 are elected annually by the board of education for the Auckland provincial district.

The only other high school in the Auckland provincial district is at Gisborne, but it is not in operation except so far as higher classes are taught in connection with the elementary school, which is subsidized by the high school governors.

NEW PLYMOUTH HIGH SCHOOL.

In the Taranaki provincial district, which lies on the west coast of the north island south of Auckland district, there is a high school at New Plymouth, the buildings overlooking the town and standing in a very healthy and commanding position. This school is under the management of a board and there were 43 pupils attending it last year. The work done by the highest and lowest classes was as follows:

Highest.—Caesar, Books I and III, Principia, part I, the whole, grammar included. French: Hachette's Third Reader, and De Fivas's Grammaire des Grammaires. Algebra: Todhunter, to quadratics. Arithmetic: The subject generally, and mental. Euclid, Books, I, II, and III, to proposition 24. History: Collier, the whole, special stress on the period James I to Victoria. Geography: Chisholm, introduction and Australasian colonies, and general topographical geography from maps. Grammar: Smith and Hall; analysis, parsing, prefixes, and suffixes. Science: Harrison's Elementary Mechanics, and lessons on light, heat, and sound. Reading: Merchant of Venice; Henry IV, parts I and II; Romeo and Juliet, and Tempest.

Lowest.—Latin: Principia, part I, exercises 1 to 6, and grammar. French: De Jardin, exercises 1 to 20, and auxiliary verbs. Algebra: Todhunter, to end of multiplication. Arithmetic: Compound rules, greatest common divisor, least common multiple, fractions, and mental. Euclid: None. History: Britons to end of Plantagenets. Geography: Great Britain and Ireland, Asia, and North America generally, and chief physical features of the world. Grammar: Morrison, etymology up to the verb. Science: General properties of matter, solids and liquids, effects of heat, etc. Reading: Fourth Reader.

Drawing.—Boys, geometrical; girls, flat and model.

Dictation in all classes. Writing in all classes except seniors. Sewing for the girls. Drill, boys and girls.

The school gave free education to 7 scholars. The mode of appointing the governors is as follows: The governor appoints 7 persons to constitute the board. Two of the members of the board retired from office at the end of the first year after appointment, two other members retired at the end of the second year, and the three remaining members at the end of the third year. The names of the members to retire were determined by the board by lot. The vacancies thus created were filled by the governor, and the members so appointed hold office for three years, and in like manner thereafter appointments to be made as vacancies occur.

The sum of £418, 15s. 1d. was received from rents of endowments, and £165, 18s. 1d. from other sources.

THE NAPIER HIGH SCHOOL.

In Napier, the chief town of Hawkes Bay provincial district, lying on the east coast of the north island and south of Auckland, there are two high schools, a boys' high school and a girl's high school. These schools are managed by one board, incorporated in 1882. The board is composed of 2 members elected by the education board, 2 by the municipal council of the city of Napier, 2 by the Hawkes Bay County council, 2 by the Waipawa County council, 1 by the Wairoa County council, and one appointed by the governor. These counties are all situated in the Hawkes Bay provincial district. The following is a short sketch of the schools, which the secretary of the board has kindly furnished:

The origin and history of the Napier high schools have an intimate connection with the early days of the province of Hawkes Bay. When the government sold the lands on which the town of Napier now stands, in the year 1856, a number of settlers combined and purchased sections 136 and 137 at the upset price of £5 for each section and built a school upon them at a cost of over £200. The purchasers vested the lands and school in three trustees, who were to hold them for the purposes of education for all future time. In 1863 a fire broke out in the town of Napier and destroyed the school. It was now evident to the trustees that the sections were too valuable and, in some ways, unsuitable for the purpose of a school, being in the very center of the business portion of the town. Hence they resolved on leasing the sections and providing for the school elsewhere. Various conflicting causes prevented the trustees from building a new school, and, with the consent of those who purchased the lands, an application was made to the supreme court in the year 1872 to sanction an arrangement for the administration of the rents arising out of the sections. The supreme court gave its sanction to a scheme by which two-thirds of the accumulated funds and the rents should be applied to the support of a girls' and a boys' public school, under the Hawkes Bay education act, and one-third to be invested for the purpose of a grammar school, and vested the land in a body of trustees for these purposes. Under this decree a public school for boys was erected on suburban section 90, sold to the trustees by the provincial council of Hawkes Bay for a nominal sum for this purpose, and the existing school for girls in Tennyson street was taken over by the trustees and greatly enlarged and equipped for the

purpose. This arrangement continued till the education act of New Zealand came into force in the year 1877, which completely upset all its provisions. A bill was prepared and laid before parliament in the year 1882, providing for a high school under a popular basis of elected governors by various public bodies. It provided that the public school occupied by the boys should be made a boys' high school, that a site on another portion of suburban section 90 should be set apart for a girls' high school, and that certain lands along with sections 136 and 137 in the town of Napier should be set apart for an endowment. The bill obtained the sanction of parliament and was at once put into force. A considerable portion of the endowment had to be sold to provide the buildings. Very shortly after the governors came into possession of the property, the leases of the sections 136 and 137 expired and were again relet by public auction at an annual rental of £745. This constitutes for the future the chief portion of the endowment. The schools are now in vigorous operation under qualified teachers.

The subjects taught are as follows:

WORK OF THE HIGHEST AND LOWEST CLASSES.

Boys.

Highest.—Mathematics: Books I to III, with deductions and exercises; algebra to quadratics; elementary trigonometry and mechanics; general arithmetic. Latin: Cicero de Senectute, Virgil's *Æneid*, I; selected sentences from prose composition; grammar. Natural science: Physiology. French: Molière's *L'Avare*; composition; selected readings; grammar. English: Composition and Morris's Historical Grammar. Geography: Physical and general. History of England, 1688 to 1857. Class singing and drawing.

Lowest.—Equal to the third standard of the elementary code of the education department.

Girls.

Highest.—Arithmetic: Percentages, stocks, general rules. Algebra: Quadratics, surds, ratio, and proportion. Geometry: Euclid, books I, II, III. English grammar: Meiklejohn's and Morris's Historical English Grammar. English literature: Victorian era; Milton's *Comus*. English history: 1688 to 1837. Geography: General and physical; Geikie's *Lessons*, 1 to 25. Modern history: Louis XIV to French Revolution. French: Macmillan's Third French Course; Molière, *Le Bourgeois Gentilhomme*; Dumas, *Tulipe Noire*, 1 to 26. German: Macmillan's First German Course, Otto's Reader. Latin: *Principia Latina*, IV; Virgil, *Æneid*, I, II, 1-500; Cæsar, I. Chemistry: Nonmetallic elements, chemical equations. Physiology: Structure of body, functions of organs, laws of health. Drawing: Free-hand, geometrical, and model. Singing: Tonic sol-fa system. Trigonometry: To solution of triangles.

Lowest.—Arithmetic: Compound rules, reduction, mental. English grammar: Parts of speech, analysis of simple sentences. History: Richard III to Charles II. Geography: Countries of Europe, England. Physical geography: Springs, icebergs, seas, currents. French: Bue's First French Course, lessons 1 to 26. Object-lesson: Light, heat, color. Reading: Macmillan, III. Drawing, freehand.

The school gave free education to 24 holders of scholarships, given by the school commissioners and 8 scholars of the education board. The numbers on the roll in 1891 were: boys, 66; girls, 53. The income from reserves and property and from interest on moneys invested and on unpaid purchase money and the amount received from school commissioners, being part of general grants, amounted to £1,266 12s. 6d.

SCHOOLS IN THE WELLINGTON DISTRICT.

Wanganui, situated in the north of the Wellington provincial district, is the seat of several educational institutions of high value. The town itself is beautifully situated on the northern branch of the Wanganui River, which is perhaps one of the most beautiful rivers in the colony. It is not far from the mouth of the river. The main school is what is termed the Wanganui Collegiate School. It is managed by trustees, but it is connected with the Anglican church of New Zealand. It is, perhaps, the largest boarding school in the colony and has been well managed for a large number of years. The Bishop of Wellington and Primate of New Zealand, the Rev. Dr. Hadfield, gives the following short résumé of the school:

It had its origin in a grant to the church of 250 acres of land, partly swamp and partly sand hills, in the vicinity of the then small town of Wanganui, about the year 1855, for the purpose of establishing a school for children of both races. For many years this land yielded very small returns, the land for the most part having been let on long leases at nominal rents, as much labor was required to render it in any degree productive. For some years a school was carried on by a very competent master, chiefly for the benefit of children of the Maori race; but, from the unsettled and disturbed state of the country at that time and from other causes, the school was not successful.

In the year 1882, higher rents having been obtained, the trustees of the property thought some attempt might be made to establish a school of a more satisfactory kind. They were able to avail themselves of an offer made by the late W. B. Harvey, D. D., of Cambridge, to establish a grammar school on a sound basis. This he did. And at the time of his rather sudden death four years ago he had a considerable number of boys both as boarders and day scholars. The school was acknowledged to be a success. Mr. W. Empson, B. A. (Oxford), who had for some time been second master, succeeded Dr. Harvey. The school has continued to improve. It has now attained a recognized position as one of the best grammar schools in New Zealand. The trustees hope that, so soon as the debt incurred for the purpose of erecting the excellent buildings in which the school is carried on has been discharged, they may be able on the same property to establish a branch school for Maori boys, for which in a few years it is probable there may be a demand.

I now annex a short statement just received from Mr. Empson:

“Programme of work, etc.: The day begins at 7 a. m. with half an hour's preparation of work. From 7:30 to 8, gymnasium or running. The morning school hours extend from 9 to 12:45. The afternoon from 2 to 3:30 in summer, 3:30 to 5 in winter. Evening preparation is carried on from 7 to 8:30. The course of instruction comprises Greek, Latin, French, English, composition and history, geography, mechanics, trigonometry, geometry, algebra, arithmetic, physiology, divinity, drawing, and shorthand. There is also a carpenters' shop, where practical carpentry is taught, a debating society, a cadet corps, and the usual cricket, football, rowing, and tennis clubs also exist in connection with the school. The present numbers attending are 155, of whom 115 are boarders and 40 day scholars. The year is divided into three equal terms of thirteen weeks each, with six weeks holidays at Christmas, four in May, and three in September.”

To this I would add that there are 8 masters, one of whom is a clergyman, a graduate of Cambridge, who is chaplain and who officiates in the excellent chapel built chiefly by the efforts of the late Dr. Harvey.

A few further details may be valuable. To understand the attitude towards this and other schools, it may be necessary to point out that

the first education act ever passed in the colony was passed in 1847, and it was entirely denominational in its character, for it provided that education should be under the management of the Anglican Church, the head of the Roman Catholic Church, the superintendents of the Wesleyan ministry, or the head of any other religious body engaged in education in the colony. To help these bodies in their work of education, grants of land were given to them by the Government. This was the origin of the Wanganui Collegiate School. A grant was given to help the Anglican Church in the teaching of the Maori aboriginal and other children. It was to be industrial in its character. As, however, a special act was passed—the native schools act—for providing education for the Maoris, the endowments set apart in Wanganui were utilized by the church for a secondary school. The course of study is that of an ordinary high school, the work of the highest and lowest classes being as follows:

Highest.—Latin, Greek, French, science, English, mathematics, drawing.

Lowest.—Latin, English, arithmetic, reading, writing, history, geography.

The total income from reserves in 1891 was £777 9s. 8d.

There is a high school for girls established in Wanganui, which has received endowments from the Government. It is under the management of a board duly incorporated, the members being the members of the education board of the Wanganui education district for the time being. This school has only been lately opened. It has 54 girls attending it and the course of study is as follows:

Highest.—Latin: Grammar exercises to end of Smith's Principia, part 1. English: Marie's grammar, Shakespeare (two plays). French: Larousse's grammar and Fleury's L'Histoire de France. German: Otto's Grammar and Hauffe's Tales. Arithmetic: Whole subject. Algebra to end of simple equations. Euclid: First and second books. History: Epochs (chosen). Geography: General, in detail.

The staff consists of Miss C. E. N. Harrison, M. A. (A 1), lady principal, and Miss I. H. Hudson, Miss M. T. Hill, B. A., Miss E. M. Krull, B. A., assistants; M. D. Blair, F. L. S., art master; Mrs. Charles Wood, matron.

The revenue from rents and moneys invested and reserve was £576 19s. 3d.

In the city of Wellington there are three excellent secondary schools, viz, the Wellington College, St. Patrick's College, and the girls' high school. The two first-named institutions are for boys.

The Wellington College arose out of a grant of land given for the purposes of higher education in 1853. The college, however, was not opened under this endowment until early in the year 1868. The following is a short history of the school:

This college was founded by Sir George Grey, K. C. B., who, in 1853, as governor of New Zealand, set apart by crown grant certain parcels of land as an endowment for or towards the maintenance and support of a college or grammar school to which persons of all classes or races who may inhabit the colony were to be equally admitted, and at which, in addition to the usual course of education in the English

language and mathematics and in such other branches of learning as the trustees may direct, all students shall, if they desire it, receive instruction in the Greek and Latin languages.

It was not until 1867, however, that a school was opened under the trustees of the land so set apart. It was begun in a small way in rented premises, but soon increased in numbers, and in 1863 a building was erected in which for the next six years the school was carried on. In 1872 an act was passed by the general assembly by which the trustees were replaced by a body corporate styled "The Governors of Wellington College," and in 1874 the school having further increased the present buildings were begun. These have from time to time been added to as circumstances required, the cost as they now stand having been upwards of £12,000.

The college buildings stand in a reserve of 63 acres, mostly consisting of hills, but with a flat piece of land in front of the buildings available as a play ground and now being enlarged and improved. The site is a commanding one and embraces the elements of considerable quiet beauty.

There is accommodation for upwards of 50 boarders, the dormitories being lofty and well ventilated. There are large class rooms and hall and gymnasium, and a dwelling house for the head master, all comprised in the one building. In the grounds are a laundry, and a cottage available as a hospital in case of illness among the boarders.

The school year is divided into three terms of thirteen weeks each.

The course of study is arranged with the view of preparing candidates for the matriculation and junior scholarship examinations of the University of New Zealand, and at the same time special attention is given to the requirements of pupils who desire to follow a commercial course.

The subjects taught are classics, mathematics, English, history, geography, French, German, natural science, drawing, and shorthand.

The fees are, upper school, £13 4s.; lower school, £10 12s. a year, including stationery.

Boarders' fees, full, 40 guineas; weekly, 30 guineas; daily, £10 guineas a year.

The number of pupils now in attendance is 119, of whom 21 are boarders.

The college and the girls' high school are managed by a board appointed as follows: The governing body of the Wellington College and Girls' High School consists of 8 members, one of whom shall be the mayor for the time being of the city of Wellington; another shall be the chairman for the time being of the education board of the district of Wellington, and of the remaining 6 members, divided into two equal groups, 3 shall be elected by the parents or guardians of pupils attending the school who have attended the school for not less than one quarter, and 3 others shall be appointed by the governor in council. And every person so appointed, excepting the mayor of the city of Wellington for the time being and the chairman for the time being of the education board, continues in office for the term of five years from his appointment.

Total revenue from reserves for last year amounted to £1,485 5s. 4d. The school fees of the college and girls' school together amounted to £2,246 0s. 5d. There are several scholarship funds, viz: The Turnbull, the Moore, the Rhodes, and the Barinecoat scholarship and prize funds. The work done by the boys will be ascertained from the following:

WORK OF HIGHEST AND LOWEST CLASSES.

Highest.—Latin: Livy XXI and XXII; Horace, Satires (books I and II); sight translation, various; Latin prose, Moir; Latin Primer, all with notes. Greek: Xenophon, Anabasis, book I, easy sight translation; Sidgwick's First Greek Reader; Grammar, Abbott and Mansfield, and accidence generally. English: Grammar—Smith and Hall and Morris; Composition: Hall, Abbot and various; Chaucer, Prologue and Nonnie Preste's Tale; Spenser, book I, canto 5; Shakespeare, Merchant of Venice; Milton, Comus; essays, various. French: Havet's Grammar, parts I and II; Havet's Composition, Nos. 11 to 22; Racine, Athalie; Sandeau, Mlle. de la Seiglière; Laniche, Le Voyage de Mons. Perichon. Arithmetic: The whole subject; Algebra: To end of permutations and combinations. Trigonometry: Todhunter for beginners. Euclid: Books I, II, III, IV, VI, and deductions. Science: Inorganic chemistry, heat, electricity. Mechanics: Todhunter for beginners.

Lowest.—Latin: Principia, part I to page 87, easy selections from Ovid. French: Elementary. English: Outlines of etymology and syntax, analysis and parsing, composition, various. Geography: New Zealand, Australia, and outlines of Europe, Asia, and Africa. History: George I to Victoria. Arithmetic: Vulgar and decimal fractions, and commercial rules.

The following scholarships were held:

College scholarships, free education	4
Levin scholarships, £10	2
Rhodes scholarship, £35	1
Scholarships of the education board	16

St. Patrick's College is a fine, substantial brick building. It is conducted by Marist Brothers, and is entirely under the control of the Marist order. Its scholars prepare for the matriculation examination of the New Zealand University. There is accommodation for boarders. It is open for inspection by the government, as holders of education board scholarships can attend it. The principal is the Rev. Dr. Waters. This is the only Roman Catholic secondary school in the colony. It was opened in 1885, and has an attendance of about 70 or 80.

The girls' high school has 113 in attendance, and is accommodated in a fine wooden building at the northern end of the city. It was started in 1882, but not formally opened till February, 1883, when 60 pupils were enrolled. The school steadily increased till 1886, when 121 pupils were on the roll, and then the present site was obtained and the buildings begun. The buildings are of wood, and cost £5,000. They are commodious, and the grounds surrounding them contain about 2 acres of land. The course of instruction includes English language, grammar, compositions and literature, modern languages and literature, history, physical and political geography, physical and natural science, Latin, arithmetic, Euclid, algebra, trigonometry, writing, vocal music, needlework, dressmaking, and calisthenics. Pupils are prepared by the regular course for the matriculation and junior scholarship examinations of the University of New Zealand. Matriculated students are also prepared for the examination for keeping the first year's term of their university course in such subjects as fall within the scope of the regular work of the school. There is also a shorthand class, and those of the pupils who wish it attend the school of design for instruction in drawing.

The school year is divided into three terms of thirteen weeks each.

The fees are, upper school, £13 4s.; lower school, £10 12s. a year, including stationery.

The pianoforte is taught at the school, the fees being paid to the teachers; those pupils who learn paying 10s. a year to the board for the use of piano.

There are at present 143 pupils in attendance.

THE NELSON COLLEGES.

The city of Nelson is situated in the north of the middle island of New Zealand on Blind Bay, and is the chief town of the Nelson provincial district. Its climate is very equable and it is a health resort. At the north of the city lies a natural breakwater called the "Bowlder bank." It has a northern or sunny exposure and in the summer there is sea breeze, which keeps the city cool. It has two high schools.

The settlement of Nelson was founded under the auspices of the New Zealand Company, and special provision was made in Nelson, as in many of the other settlements, that a sum should be devoted by the company for religious and educational purposes. The establishment of a college in Nelson was specially mentioned as one of the educational objects that was to receive aid from the company, and trustees were appointed under an act of the imperial Parliament to receive these funds for this purpose. The first trustees were, David Munro (afterwards Sir David Munro), Francis Dillon Bell (afterwards Sir Francis Dillon Bell), Alfred Fell, and John Waring Saxton. In 1854 the Nelson trust funds act was passed, which provided for the appointment of new trustees and for the management of the trust funds that were to be obtained from the company. The company, however, did not pay these moneys at that time to the trustees, and it was not until after some negotiation, and after the government of the colony had undertaken the liabilities of the New Zealand Company, that funds were obtained for the founding of the college. By a deed dated 14th November, 1857, £20,000 was set apart for a college, that was to be managed by a visitor and nine governors. In 1858 application was made to Parliament to incorporate the trustees that had been appointed by deed, and the Nelson College act, 1858, was passed, which is the act under which the college is still managed. The trust deed declared that the college was to be an educational institution for the advancement of religion and morality and the promotion of useful knowledge, and that creed could not be admitted as a disqualification either as regards teachers or pupils. The course of instruction was to include the English language and literature, one or more modern languages, geography, mathematics, classics, history, drawing, music, and such other branches of art and science as the council shall at any time determine. No pupil was to be admitted under the age of 9 years, nor unless he was able to read fluently, to write with tolerable accuracy from dictation, and be

familiar with the first four rules of arithmetic. The college had been opened in temporary premises in 1856, and it was not until December 7, 1859, that the present college buildings were commenced. The buildings, including the land, cost £13,000. The following have been the head masters: J. C. Bagshaw, M. A.; Mr. George Heppel, M. A.; Mr. A. R. Broughton, M. A.; Mr. J. D. Greenwood; Rev. C. L. Maclean, M. A.; Rev. F. C. Simmons, M. A.; Rev. J. C. Andrews, M. A.; Mr. W. J. Ford, M. A., and the present principal, Mr. J. W. Joynt, M. A.

The board of governors consists of 9 members, appointed by the governor in council. The following are the present members of the board:

Hon. J. W. Barnicoat, M. L. C.; C. Y. Fell, esq.; Alfred Greenfield, esq.; W. C. Hodgson, esq.; Albert Pitt, esq.; Hon. J. C. Richmond, M. L. C.; James Sclanders, esq.; John Sharp, esq.; Hon. Joseph Shephard, M. L. C.

The staff is as follows: Principal, John W. Joynt, M. A. (Dublin); second master, W. S. Littlejohn, M. A. (Aberdeen); third master, F. G. Gibbs, M. A. (New Zealand); fourth master, E. F. W. Cooke; music and drawing, a visiting staff; drill instructor, Sergeant-Major Nixon; science master, W. S. Littlejohn, M. A.; resident masters, the principal, Mr. Gibbs, and Mr. Cooke; lady matron, Miss E. B. Bell.

The following statement from the programme of the college will be of interest:

The regular course of instruction embraces ancient and modern languages, history and literature, pure and applied mathematics, political and physical geography, English composition, grammar and analysis, and physical science and chemistry. Special attention is given to the subjects required for the various university and civil-service examinations. Special arrangements have been made for the more systematic teaching of science, and a new and suitable laboratory has been built and equipped with the apparatus requisite for the study of chemistry and assaying.

The college is situated in a commanding position about a quarter of an hour's walk from the town. The sanitary arrangements are of the best description.

The beautiful situation and salubrious climate of Nelson render it especially attractive as a center of higher class education. In these respects it offers inducements which are perhaps not equalled in any town in the colony. The moral and physical welfare of the boys is carefully looked after by the masters, and a lady matron of skill and experience has charge of their diet and domestic arrangements. Though the college is strictly undenominational, the boys are expected to attend a place of worship according to their religious profession, unless their parents otherwise direct. A Bible class is also held by a visiting clergyman on Sunday mornings, which boys whose parents desire it are required to attend.

There are in connection with the college a library containing a large number of books, and regularly supplied with periodicals; an extensive football and cricket ground, with a carefully prepared pitch, and a gymnasium with the usual appliances. There are also a cadet corps and a fire brigade, and all boys are drilled twice a week.

Pupils, on entrance, must be at least 9 years of age, and able to read and write and work the first four rules of arithmetic with reasonable facility.

The following scholarships were held during the last quarter of the year:

Endowed: Tinline, £52 12s.; Newcome, £24; Richmond, £24; Stafford, £20; Fell, £16.

Foundation: First classical, £20; second classical, £10; third classical, £5; first mathematical, £20; second mathematical, £10; third mathematical, £5.

Governors' fees: First modern languages, £12 12s.; first English literature, £12 12s.; second English literature, £12 12s.; chemistry, £12 12s.

Simmons prize: £6.

Eleven scholarships of the Nelson education board and two of the Marlboro education board were held.

The highest class work is preparation for the university scholarship examination.

In 1882 the governors were empowered by act to expend a portion of their funds in the erection of a college for girls, and a building was put up of wood, at a cost of £5,000. The first lady principal was Miss Kate Edger, M. A.; she afterwards resigned, on her marriage, and was succeeded by Miss B. E. Gibson, M. A., who is the present principal.

The number on the roll in 1891 was 76, the boarders numbering 33. It is managed by the same governors. The staff is as follows: Lady principal, Miss B. E. Gibson, M. A.; assistant mistresses, Miss Harrison, M. A., Miss Watson; science master, Mr. W. S. Littlejohn, M. A.; music mistresses, a visiting staff (at present of 5 teachers); drawing mistress, Miss Morgan.

The course of study may be gathered from the following programme:

The regular course of instruction includes the English language and literature, French, German, Latin, mathematics, the elements of science, class singing, needle-work, drilling and Indian club exercises, with the other usual features of a liberal education. Special attention is given to the subjects required for the various university examinations.

The college is situated on about 3 acres of rising ground in one of the healthiest and most commanding positions in Nelson, within ten minutes' walk of the center of the town, yet as retired as if in the country. The building is provided with fire escapes and other means of egress; the rooms throughout are lofty and airy, and the class rooms well lighted and well ventilated. The bed rooms are most of them single, and where two or more pupils occupy the same room separate beds are provided. All are comfortably fitted up and pupils require nothing but their own personal clothing, as house and table linen is supplied by the college.

The assistant mistresses reside in the college, and aid the lady principal in the supervision of the boarders out of school hours.

The grounds include two asphalt tennis courts. Two tennis clubs (senior and junior) have been formed and hold annual tournaments. Other means of exercise and amusement are also provided. A school library has been established and a reading room has been set apart, where several of the best monthly periodicals are to be seen.

Attached to the college is a good studio, well furnished with casts and models. Classes for drawing and painting are held both in the day and in the evening.

The school is strictly undenominational, but a Bible class is held on Sunday afternoons, attended by both boarders and day pupils, at the option of the parents; and once a week a clergyman visits the college to give religious instruction to all whose parents may wish them to attend.

Parents are allowed to a great extent to choose the subjects of instruction taken up, and in cases where some subjects are omitted, arrangements can be made, if desired, for pupils to prepare their home lessons during school hours, but only a moderate amount of home preparation is expected, except in cases where pupils wish to work up for special examinations.

There is a whole holiday on Saturday.

Pupils on entrance must be able to read and write and work the first four rules of arithmetic with reasonable facility.

The following scholarships were held during the last quarter of the year:

Tinline, £52 12s.; Edgar, at £15, two; governors' fees, at £15, two; school commissioners, at £12 12s., six. Eight scholarships of the Nelson education board were also held.

It receives a subsidy from the secondary reserves of the provincial district. The rents and income from endowments amounted to £2,219 19s. 2d. for both colleges, whilst the fees, including boarders' fees, came to £4,365 14s. 1d.

The Nelson colleges practically supply the wants of the educational districts of Westland, Gray, Nelson, and Marlboro. There is, however, a high school attached to the elementary schools at Hokitika and Greymouth, two mining towns on the west coast of the middle island. The higher branches are taught in these schools and fairly satisfactory work has been done. The number of pupils attending the advanced classes is, in Hokitika 21 and in Greymouth 25.

CHRIST'S COLLEGE AND GRAMMAR SCHOOL, CANTERBURY.

Canterbury was originally founded as a Church of England settlement by the Canterbury Association. The church received considerable grants of land for church purposes from the association. Part of this church endowment was applied in establishing the Christ's College and Grammar School.

The attendance last year was 179 boys. The following is a statement regarding scholarships:

Gould scholarships.—About £450 annually is available for scholarships. They consist of 4 senior scholarships and 8 junior scholarships; an amount is given to assist the boarding expenses of boarders.

Somes entrance scholarships.—The subjects for examination for these scholarships are offered for competition each year. The value is the amount paid for school fees and each scholarship is tenable for two years. There are now 17 scholars on this foundation, all of whom are from government primary schools.

Buller and Reay scholarships.—Exhibitions are given from this endowment to sons of clergy and other boys who may require assistance. The value of the exhibitions is determined annually according to the amount available for the endowment and the number of claimants. About £450 annually is available for the school.

Tancard history prize fund.—Prizes are given annually from this endowment for proficiency in history and English literature.

The remainder of the funds available (from the Somes endowment, £60; also from the Buller and Reay endowments, £140; the whole of the Rowley endowment, £210; and of the Dudley endowment, £25; in all, £435) is devoted to scholarships and exhibitions in the upper or collegiate department of Christ's College, students in which are required to study for their degree at Canterbury College.

The total income from endowments was £3,080 19s. 9d. in 1891.

The work done by the highest and lowest classes is as follows:

Highest.—(a) Divinity. (b) Latin: Livy, Book XXI; Horace, Odes (Book IV) and Epodes; Virgil, Book VI; Bradley's Arnold's Latin Composition; Bradley's aids to Latin prose; grammar (sight translation); Roman history and antiquities. (c) Greek: Thucydides, Book VII, 1-14; Euripides, Hippolytus; Arnold's Greek Prose Composition; Sidgwick's Greek Prose (sight translation); Grammar; History and Antiquities. (d) Mathematics: Arithmetic (Hamblin Smith); Euclid, Books I, IV, and VI (Hall and Stevens); Algebra to permutations and combinations (Hall and Knight); Trigonometry, to solution of triangles (Lock); problem paper weekly. (e) Science (modern side): Dynamics (Lock); Statics (Lock); hydrostatics (Hamblin Smith); sound and light (Deschanel, Lees). (f) English: Chaucer's Prologue; Milton's Early Poems; Shakespeare's Merchant of Venice; Julius Cæsar; Grammar (Moon's); Composition. (g) French: Hachettes Third French Reader; Edmond About: Verqueray's French Idioms; Macmillan's Composition; Gaze's French Grammar; Brachet's Public School Grammar. (h) German (modern side); Otto's Grammar; Hauff's Karawane; Composition; poetry for repetition (Buechin).

Lowest.—(a) Divinity. (b) Arithmetic: Simple and compound; reduction; easy problems. (c) Euclid: Definition of first book; axioms. (d) English: History (Gardiner's outline); Elizabeth. Geography: Drawing maps of Europe, Asia, Africa, America, Australasia, chief capes, rivers, mountains, etc., on map of the world; simple lessons in physical geography; essays; dictation; reading. (e) French: Gaze's first French book, first twenty-eight lessons. (f) Latin: Subsidia Primary, to p. 31; *sum* and four verbs, active and passive.

CHRISTCHURCH BOYS' HIGH SCHOOL.

The Christchurch Boys' High School was incorporated by an act of the General Assembly, and the following are the main provisions of the act:

The Board of Governors of the Canterbury College to have power to manage and deal with all lands vested in them by the act, and the rents and profits derived from such lands as they may think fit for the establishment of a boys' high school in or near the city of Christchurch.

The board to have the power of appointment of teachers, officers, and other persons, and all other powers and duties for the carrying on of the school.

It is managed by the Canterbury College council, to which reference will be made when something is said regarding the university education of the colony. It is well endowed, the income from reserves amounting to £3,193 3s. 6d. The number of pupils in attendance during the last year was 151. The school gave free education to 26 scholars. Nineteen scholarships of the North Canterbury education board were held at the school. The work of the highest and lowest classes is as follows:

Highest.—Latin: Ovid, selections; Virgil, *Æneid* VI; Livy, The Macedonian War; First and second orations of Cicero against Catiline; Smith's Smaller History of Rome; Bradley's Arnold; Bradley's Aids to Latin Prose (Upper V); Latin Prose, Part I (Cæsarean prose); Revised Latin Primer; Latin grammar and junior scholarship papers; Primer of Roman Antiquities. English: Shakespeare, King Lear; Chaucer, Prologue; Milton's Paradise Lost, Books I and II; George Eliot's Silas Marner; Mason's English Grammar; Literature Primer; Abbott's How to write clearly.

French: Theophile Gautier, Scenes of Travel; Corneille, *Le Cid*; Macmillan's Progressive French Course, Part II; Macmillan's Course of French Composition, First Course; Fasnacht. Mathematics: Algebra, to permutations and combinations; Euclid, Books I to VI; Barnard Smith's Exercises in Arithmetic; Lock's Trigonometry for beginners, to solution of plane triangles. Science: Fisher's Elementary Chemistry; Jago's Inorganic Chemistry; Garnett's Heat. Bookkeeping: The Irish Educational Series. Greek: Mayor's Greek for beginners; Greek Grammar Primer, Abbott and Mansfield; Xenophon, *Cyropædia*, selections; Thucydides, Book IV, chapters I to XXX. History: Longman's, Epoch, Settlement of Constitution, Modern England; Student's Hume, Part II, 1688 to 1878; Acland and Ransome's Skeleton Outline of English History for Beginners. Drawing: Free-hand and Model Geometrical, Longman's Drawing Books.

Lowest.—Latin (Upper): Abbott's *Via Latina*, The Shorter Latin Primer. Lower I: The Shorter Latin Primer; Nelson's Brief History. English: Abbott's How to Tell the Parts of Speech; Longman's Reader, Standard IV; Nelson's Brief History. French: Macmillan's French Course, Part I. Mathematics: Nelson's Arithmetic (No. IV), simple and compound rules. Geography: Hill's First Lessons in Geography. Singing: Curwen's Pupil's Manual of Tonic Sol-fa; Collegiate Singing Manual. Writing: Jackson's Vertical Writing Copybooks, Nos. 1, 2, 4, 6, 8; extra writing class, Saturday, 12:30 to 1:16. Drawing: Free-hand. Swimming: From 4 p. m. to 5 p. m. in the summer months. Drill: Tuesday and Thursday, 12:30 to 1 p. m.

The following is a short sketch of the origin and history of the school:

The school was opened in May, 1881. The numbers have gradually been increasing until the present date, when they stand at 151. The staff consists of the head master and seven assistant masters, exclusive of visiting instructors in drawing, singing, drill, etc. Two of the masters are from the home universities of Oxford and Cambridge; the others are from the New Zealand University.

The school is a genuinely secondary school; that is, it carries on the education of the primary school, from which it draws a great part of its pupils, up to the university standard.

There are at present 11 old high-school boys at Canterbury College. Four old pupils have taken their M. A. degree with honors.

The fees are very low, being £9 9s. per annum for boys over 12 years, and £6 6s. for boys below that age, if punctually paid. Last year 29 boys were receiving free education at the school, and there were 18 boys in attendance holding scholarships given by the board of (primary) education of North Canterbury.

Boys in the highest classes do Horace, Livy, Cicero, unseen translation, Bradley's Arnold, and continuous Latin prose composition; historical English grammar, Chaucer, Shakespeare, etc., and English essays; algebra (to permutations); Euclid I, VI, trigonometry; also French, science (inorganic chemistry and heat), and two boys learn Greek.

The lowest class reads Star Reader, Standard IV, and works the four rules, simple and compound, of arithmetic. The greater part of the school time is given to English, Latin, and mathematics.

There is also technical instruction for selected classes in geometrical drawing, bookkeeping, carpentering, etc.

One noticeable feature of the school is the reclassification of the boys in each subject; so that a boy, for example, may be in the III English, the upper I Latin, the IV mathematics, and so on, so that no boy is discouraged because of his backwardness in one subject.

Though the school sends on many to the university, of course the majority of the boys leave early for business; and for them the reclassification of the school in each subject, the copious English instruction, and the miscellaneous classes (geography, drawing, science, bookkeeping) are calculated to give a thorough sound education preparatory to their different callings.

The school has its football teams, its cricket club (with a good playing ground), five courts, and swimming bath. Swimming is taught during the summer months by a special instructor. Military drill and ordinary physical drill are taught by a competent instructor. The cadet corps parades twice a week.

In September, 1891, two large rooms were opened for school use; one an ordinary classroom, the other a chemical laboratory.

There is a playground attached to the school.

New boys are admitted between 9:30 a. m. and 12 o'clock on the day before the commencement of each term. Parents and guardians are requested to attend with their boys at the time of application for admission. Forms of application may be had at the school or Canterbury College. Boys are admitted at any age between 9 and 15. Applications for admission after the latter age and before the former are considered on their merits. In the case of boys above 11 a certificate as to conduct is required from their previous school or tutor.

The fees are £3 3s. a term for boys under the age of 12 years, and £4 4s. a term for boys who have reached that age; but if paid within fourteen days from the first day of attendance, they are £2 2s. and £3 3s., respectively. They must be paid to the registrar at Canterbury College. Before the withdrawal of a boy from the school written notice of removal must be sent to the head master by the parent or guardian, otherwise he will be liable for the fees of the ensuing term.

There are three terms in the ensuing year, each of thirteen weeks. The terms for the year 1892 are as follows: First term, from February 4 to May 4; second term, from May 26 to August 24; third term, from September 22 to December 21. Each term begins on Thursday. On the day before (Wednesday) all candidates for admission must present themselves.

The school hours are from 9:30 to 12:30, and from 2 to 4 p. m. On Wednesday and Saturday there is a half holiday.

The school course includes the English language and literature, geography, ancient and modern history, French, Latin, arithmetic, mathematics, natural science, writing, drawing (free-hand and geometrical), bookkeeping and correspondence, class singing and drill. Boys who are likely to remain at school only a short time may with the approval of the head master, take science, shorthand, and drawing in place of Latin. Greek and German will be taught to those boys whose parents desire it, if there be a sufficient number. The bookkeeping class is intended for boys about to leave for business. Singing is taught only to junior boys. Drill is compulsory for all boys not specially exempted. The work of some of the higher classes is arranged with a view to matriculation and junior scholarships. For boys who leave early for business, the school curriculum admits (subject to the sanction of the head master) of considerable choice of subjects.

There is a suitable workshop, fitted with excellent lathes, joiners' benches, and tools, in which instruction is given in carpentering, the use of tools, etc., out of school hours. The fee is 5s. per term, and covers instruction for two hours a week. Boys are allowed to keep the articles they make, after paying the cost of timber when appreciable.

Attached to the school are a playground, fives court, swimming bath, museum, and lending library. Swimming is taught from 4 to 5 p. m. during the summer months. The cricket ground is on the association ground in Hagley Park south. Parents are urged to encourage their boys to take part in all school games. The subscription to the sports fund is 2s. 6d. a term for senior boys, and 1s. for junior. There is a cadet corps in connection with the school, under the direction of Maj. U. V. Richards. Boys must wear the school hat or cap.

Exhibitions.—(1) Foundation exhibitions: Four exhibitions amounting to the school fees for one year are open each year to those boys who do best in the annual school examination. In awarding these exhibitions account will be taken of the age and circumstances of the candidate, and of the likelihood of his proceeding to the uni-

versity as well as of his place in the examination. (2) Governors' exhibition: The board of governors of Canterbury College award eight exhibitions amounting to the school fees, and tenable for three years, to the boys who stand next in order to the scholarship winners in classes A and B in the scholarship examination held each year by the education board of the North Canterbury district, provided these boys qualify in accordance with the regulations of the board. No school exhibition will be awarded to a boy holding any other exhibition or scholarship, if it would raise the amount held by him above the value of a scholarship of the board of education. School exhibitors must produce to the registrar, at the close of each term, a certificate from the head master of satisfactory attendance, conduct, and progress. The exhibitions will be terminable at any time on an unsatisfactory report from the head master. (3) Leaving exhibitions: An exhibition of £15, tenable for at least two years at Canterbury College, is given to the boy who, in the university junior scholarship examination, while failing to win a scholarship, is placed highest among the candidates from this school, in the list of those "deemed to have passed with credit."

The following is the teaching staff:

Head master.—C. E. Bevan-Brown, M. A., late scholar of Lincoln College, Oxford.

Assistant masters.—B. K. S. Lawrence, late scholar of Jesus College, Oxford, B. A., New Zealand University; J. P. Grossman, M. A., senior scholar, New Zealand University; W. Walton, B. A., late scholar Emanuel College, Cambridge; R. M. Laing, M. A., B. SC. (science master), senior scholar New Zealand University; A. Merton (junior form master).

Part-time teachers.—O. T. Alpers, M. A., Tinline scholar, New Zealand University; R. Speight, M. A., B. SC., senior scholar New Zealand University.

Drill instructor.—Maj. U. V. Richards, C. R. V., late lieutenant Eighty-seventh Fusiliers.

Class singing.—Mr. H. Wells.

Drawing.—The masters of the school of art.

Swimming master.—Mr. W. Garrard.

Registrar.—A. Crackroft Wilson, Canterbury College.

CHRISTCHURCH GIRLS' HIGH SCHOOL.

The Christchurch Girls' High School was established in 1877, and is managed by the board of governors of the Canterbury College. It has an income from reserves and interest on money invested of £632 5s. 5d. The teaching staff is as follows:

Lady principal.—Mrs. Macmillan Brown, M. A.

Assistants.—Miss C. Henderson; Miss M. Aikman, B. A.; Miss M. Lorimer, M. A.; Miss A. Mills, M. A.; Miss E. Stevenson; Miss E. F. Ainsworth; Miss A. E. Tindal, M. A.

Class singing.—Mr. G. F. Tendall, Mus. Bac. Oxon. and N. Z.

French and German.—Mrs. Lane.

Cooking.—Miss S. M. Henderson, Miss E. Wilson.

Dress cutting.—Miss Keating.

Calisthenics.—Maj. Richards.

Swimming.—Mr. Garrard.

There are three terms of thirteen weeks each. The tuition fees are as follows,

	£	s.
Girls under 12 years, per term.....	3	3
Girls 12 years and over.....	4	4

If the fees are paid after the first fortnight from date of attendance, they will be—

	£	s.
Girls under 12 years, per term.....	4	4
Girls 12 years and over.....	5	5

Notice of removal must be sent in writing to the lady principal before the end of the term in which a girl is leaving, otherwise the fee for the ensuing term must be paid.

The subjects taught are: The ordinary English subjects; history, English and Roman; geography, physical and political; English literature, English composition, Latin, French, German, mathematics, botany, physiology, physics, cooking, dress cutting, sewing, drawing, class singing, calisthenics, drill, swimming.

Classes are held on Saturday morning for instruction in cooking and dress cutting, and are open to girls from the upper part of the school.

Parents will, to a certain extent, be allowed to choose the subjects in which they wish their daughters to be instructed.

Extras: Music taught by Mr. G. F. Tendall.

Reports of conduct, progress, and position in class are sent to parents at the end of every term.

Girls are admitted from 8 years old and upwards.

There is a playground of half an acre, with lawn tennis, etc., attached to the school, and luncheon rooms are provided for those who stay between 12:30 and 2 p. m., and also in the winter term tea or cocoa at a slight charge.

The school is a day school, but there are ladies living near who take boarders at £40 per annum, or £45 if they remain during the holidays.

The board of governors offers to the pupils of the school four exhibitions annually, of the value of £13 and £12, according as the holder is in the upper school or the lower.

In the first term of each year there are also offered to girls who wish to enter the school eight scholarships, four senior and four junior, of the value of £15 and £12, respectively. Two of the senior scholarships and two of the junior are held for two years, the others for one year.

The following is a brief sketch of the origin and history of the school, kindly furnished by the secretary of the Canterbury College:

The school was opened on September 13, 1877. During its early years the numbers varied from about 70 to 90; for some years the numbers have been, as a rule, between 140 and 150.

On the teaching staff at present, besides the lady principal, there are seven assistants, for the most part graduates of the New Zealand University, and six visiting teachers.

The whole work of the school during each year is examined at the end of the year by outside examiners, such as the professors of the college; the practical subjects, also, are examined by experts.

The upper classes of the school prepare for matriculation and the junior university scholarship examination. Several girls matriculate every year, and since 1879 21 junior university scholarships have been gained by pupils of the school.

There are at present 23 ex-pupils at Canterbury College; 9 others, ex-pupils of the school, have taken their M. A. degree with honors; 6 have taken their B. A. degree.

The work of the highest and lowest classes is as follows:

Highest.—English: Grammar, Mason's English Grammar; Morris's Smaller Historical English Grammar. Composition: Essays on subjects from books read; correction of sentences, etc. Literature: Shakespeare's *Tempest* and *Lear*; Spenser's *Faerie Queene*, first half of Book I; Morell's *English Literature from Chaucer to Goldsmith*. Latin: Grammar, Bradley's *Arnold*; Abbott's *Idioms* (Latin prose

composition at sight and prepared). Translation: Virgil, *Æneid*, Book vi; Cicero's *De Senectute*; selections from Horace's *Satires* and *Epistles* (Maemillan's Series); selections from Cicero's *Letters* (Maemillan's Series); Scenes from Terence's *Andria* (Maemillan's Series); translation at sight. French: Grammar, Bracket's Public School French Grammar; Bue's Idioms; French prose composition; French conversation; translation, *Capi et sa Troupe* (H. Malot); *La Mare au Diable* (George Sand); *Tartuffe* (Molière); *Jeanne d'Arc* (Lamartine); *Au Coin du Feu* (Souvestre); *L'Avare* (Molière). Mathematics: Arithmetic, algebra, Euclid, and trigonometry, as for the junior university scholarship examination. Science: Botany and heat, as for the junior university scholarship examination. Optional subjects: Cooking, dress cutting, swimming.

Lowest.—English: Reading (Royal Reader No. v), spelling, writing; composition on stories read; letters. Grammar: Definitions of parts of speech; easy parsing. History: Gardiner's History, Part I, from the invasion of Britain to the end of the reign of Edward II. Geography: The chief divisions of the world, the general geography of New Zealand. Science: Elementary botany and physiology. Drawing: Elementary freehand. Sewing class, singing, swimming, drill.

The school gave 16 scholarships at £15. Nine scholarships of the North Canterbury education board were held at the school.

RANGIORA HIGH SCHOOL.

The Rangiora High School is situated 18 miles from the city of Christchurch. It is managed by a board appointed by special act of parliament in 1881. Its income from reserves is £116 7 per year. The number of children attending the school is 31. The following is the work of the highest and lowest classes:

Highest.—(One girl) Latin, arithmetic, Euclid, algebra, trigonometry, English, French, botany, heat, as for junior scholarship examination of the University of New Zealand. Next form: Latin—Public School Latin Primer; accidence and syntax; translation, *Cæsar, De Bello Gallico*, Book I, chapters 1 to 29. Composition—Sentences. Roman History: Smith's Smaller. Arithmetic: The whole subject. Euclid: Books I, II, III. Algebra: To simple equations and problems. English: Mason's Outlines of English Grammar; Stopford Brooke's Primer of English Literature; Goldsmith's Traveller; parsing and composition. French: Bracket's Public School French Grammar to exercise 24 (2 pupils); Maemillan's First French Course to exercise 30 (6 pupils). English History: Gardiner's Outlines (Brunswick period). Geography: Hughes's Class-book of Modern Geography (Asia). Science: Botany and physiology, Murphie's text-books. Drawing: Blair's Freehand Series. Book-keeping (some pupils). Shorthand: Pitman's Phonographic Teacher (a few pupils).

Lowest.—Arithmetic: To weights and measures. English: Morrison's Grammar; parsing and composition; reading, dictation and spelling; Star Readers No. v. English History: Brief History to Brunswick period. Geography: Phillips' First Geography (Asia and America). Drawing, mapping, writing. French: Ahn's First French Course.

The school gave free education to 2 boys.

The following is a short history of the school, supplied by the chairman of the board of governors:

This school was established by an act of the general assembly of New Zealand in parliament assembled in the year 1881, and endowed with a grant of land comprising 233 acres absolutely invested in the Rangiora High School, and the management delegated to a board of governors, consisting of 7 persons, of whom one is the mayor for the time being of the borough of Rangiora by virtue of his office, two are elected

by the county council of Ashley, two by the board of governors of Canterbury College, and two by the board of education for North Canterbury, such being a body corporate with perpetual succession and a common seal.

The first meeting of the board of governors was held in the council chamber of the borough on December 28, 1881, in compliance with an order of his excellency the governor in the New Zealand Gazette, dated December 22, 1881, when the election of chairman, the rules for conducting the business of the board, and the ways and means were fully discussed and agreed upon.

The board's application to the government for further assistance in November, 1883, having failed, and the offer of a most desirable site for the school premises at a cost of £600 having been submitted, the board's anxiety to see the school started increased, whereupon an appeal for aid was made to the residents in the district, which met with a hearty and liberal response, £280 being readily subscribed. With this sum and \$391, accumulated rents from the estate, the board was enabled to purchase the property offered and proceed to having a schoolroom built.

On January 28, 1884, the school was opened with an attendance of 15 pupils, under the charge of Mr. H. E. Tuckey, B. A., St. John's College, Cambridge, as head master. The ceremony of opening the school was attended by a large number of people from various parts of Canterbury, the proceedings being presided over by Mr. Andrew Hunter Cunningham, the chairman of the board of governors, who had been indefatigable in canvassing the district to get the school started. The Hon. C. C. Bowen, then the member for the district in the house of representatives, and by whose exertions the endowment for the school had been obtained, gave a very able address, pointing out the advantage to be derived from the teaching in secondary schools, adverting to the smallness of the endowment, but wishing success to the high school of Rangiora. Several other influential gentlemen gave excellent addresses.

The school now passed through two years of varying fortune, and it had been contemplated to temporarily close it, when in March, 1886, the head master resigned and was succeeded by the appointment of Mr. T. W. Rowe, M. A., senior scholar of the University of New Zealand and exhibitioner of Canterbury College, 1883 and 1884, under whose able superintendence the school has materially improved.

There is a small high school at Ashburton. Its income from reserves amounts to £536 11s. 9d. The highest work is that of preparing scholars for the university matriculation examination, and the lowest work is elementary. It has an attendance of 29 pupils.

There is also a high school at Akaroa. It has £215 9s. 6d. reserves. This school is doing little work beyond that of an elementary school of a higher grade. It has 14 pupils in attendance.

TIMARU HIGH SCHOOL.

The Timaru High School is situated close to the beautiful coastal township of Timaru, where there has been constructed a large break-water, which enables vessels to lie in safety in the bay. It is the center of a very important agricultural district, and is the seat of the South Canterbury education board. The rents received from reserves for the past year amounted to £1,525. The work of the highest and lowest classes is as follows:

Highest.—English: Mason's Grammar, Abbott's How to Write Clearly, Hodgson's Errors in English (part), Abbott and Seeley's English Lessons for English people (part), Bowen's Studies in English, Shakespeare's As You Like It, Macaulay's Fred-

erick and Chatham, School Tennyson (Part iv), Milton's Paradise Lost (Book i), and Early Poems. Latin: Horace, Odes, Book iii; Cæsar's Gallic War, Scenes (Colbeck) Cicero's Letters; Unseen, Livy, Virgil, etc.; Abbott's Via Latina; Simpson's Cæsarean Prose. Greek: Xenophon; Euripides, Hecuba; Thucydides, Book i; prose composition, various. French: Macmillan's Course, second and third years; Lazare Hoche (Bonnechose); Anecdotes Historiques et Littéraires (Lastner); On ne saurait penser à tout (Musset). German: Macmillan's Course, first year; Hauff's Stories (Mullin's and Storr). Mathematics: Arithmetic, Lock, etc.; geometry, Cuthbertson's Euclidian Geometry; algebra, Hall and Knight; trigonometry, Lock. Science: Blackie's Elementary Dynamics; Lock's Statics and Dynamics; Sanderson's Hydrostatics; Garnett's Heat; Remsen's Elementary Chemistry; Howard's Practical Chemistry; botany (Paul Bert). Geography: Longman's for Australasia. History: Buckley's and lectures. Commercial class: Bookkeeping, Irish National Series; shorthand, Pitman; Tot's Correspondence; indexing. Drawing: Freehand, model, geometrical, mechanical.

Lowest.—Gulliver's Travels, Longman's New Reader (No. 4), Blackwood's Stories from English History, Abbott's How to Tell Parts of Speech, Petrie's First Geography, Star Arithmetics, Bue's Early French Lessons, Paul Bert's First Year of Scientific Knowledge, Southern Cross Copy-books, Colonial Drawing Books (free-hand and geometrical).

Boys.—Cadet corps and junior drill; gymnastics, seniors and juniors; singing, juniors.

Girls.—Gymnastics and drill with Indian clubs, French wands, and dumb-bells; plain and fancy needlework, and knitting; singing.

During the year a school library was founded by efforts made within the school itself. It now contains 200 volumes. A carpenter's shop has also been established in connection with the school. It is intended by combining carpentry with the work of the classes in practical mechanics, mensuration, and geometrical and mechanical drawing, to afford a certain degree of technical education, more especially for those boys who do not take Latin.

All the candidates for public examinations during the year were successful. Five girls and 3 boys passed the matriculation examination of the university. One girl passed the civil service examination.

The standard of the work of the highest class has been raised from that of the matriculation examination to that of the junior scholarship in the case of every subject. The middle of the school on the boys'side has now classes in all the chief commercial subjects, and there are now seven classes doing regular work in seven various branches of science as against the former weekly lecture.

The head master has kindly forwarded the following note on the school and its work:

This high school, established and constituted under "the Timaru high school act, 1878," and the amendment act of 1882, was opened for pupils in February, 1880.

From February, 1880, to April, 1889, the rector was Mr. A. L. Halkett Dawson, M. A. (bursar, prizeman, and graduate in honors of the University of Aberdeen; sometime assistant to the professor of English and logic, Aberdeen; and English master, ladies college, Melbourne.).

The present board and staff are as follows:

Board of governors.—The Venerable Archdeacon Harper, M. A. (chairman); William Balfour, esq.; E. Elworthy, esq.; Sandham Gillingham, esq.; S. W. Goldsmith,

esq.; W. B. Howell, esq.; W. Priest, esq.; D. M. Ross, esq.; W. M. Sims, esq.; J. W. Ziesler, esq.

Secretary.—Maj. Bamfield.

Head master.—George Hogben, M. A. (mathematical honors), formerly scholar and prizeman, St. Catherine's College, Cambridge; gold medallist, Royal Geographical Society; formerly mathematical and science master, boys' high school, Christchurch; late inspector of schools, North Canterbury, New Zealand.

Assistant Staff.—A. J. Mayne, M. A. (honors Latin and English), formerly junior scholar, University of New Zealand; J. H. Smith, M. A. (honors Latin and Greek), junior and senior scholar, University of New Zealand; M. H. Brown, intermediate M. B. (University of London); Miss M. J. McLean, M. A., honors (Latin and English); Mrs. Pearson (Cert. Victoria). Music, ———. Drill and Gymnastics, Sergt. Maj. Jones. Carpentry, R. Thyne.

The boys' and girls' schools are quite separate; though for the sake of convenience pupils of the highest class are taught in the same room.

The school curriculum admits of considerable choice of subjects, and parents are invited to consult with the head master as to the subjects pupils should take up.

The school has, besides the usual playgrounds, a gymnasium, a fives court, tennis courts, carpenter's workshop, and a museum.

The fees are: Senior, £4 6s. 8d. per term; juniors, £3 13s. 4d. per term. These are payable at the secretary's office, in advance. If paid within fourteen days from commencement of the term a reduction of £1 per term is made.

In the case of more than two from the same family, a further reduction of £1 per pupil is made for each pupil after the first two.

Boys are received as boarders by the head master; fees for board, £13 per term, payable in advance. Arrangements can be made for weekly or day boarders.

Parents who wish to send girls as boarders are requested to communicate with the head master, who will assist them in making suitable arrangements.

Exhibitions.—The Cain exhibition (£10 for one year) is awarded to that boy or girl who stands highest in the annual school examination and declares his or her intention of competing for a junior scholarship of the University of New Zealand. The governors give free education to holders of education board scholarships.

The special features of the teaching in the school are as follows:

(1) In the teaching of languages, grammar and composition are subordinated at first to the translation and comprehension of the language; the grammar is gradually built up from examples occurring in the translation, and composition is taught, not by isolated sentences, but by variation and imitation of the translation.

(2) In mathematics, and especially in geometry, as much use as possible is made of the concrete, by means of models, etc.; in trigonometry the school grounds and neighborhood are actually surveyed.

(3) All science is taught by means of experiment, the experiments and observations being made by each pupil individually or by pairs. In mechanics and physics generally as much quantitative work as possible is done. The school possesses good sets of apparatus for this purpose, as well as good physiological models, specimens of natural history and mineralogy, and a good microscope.

(4) The pupils are all expected to go through a complete course of drawing.

(5) The technical work (carpentry for the seniors, Sloyd carpentry and Sloyd cardboard models for the juniors) is made to fit in with the rest of work, *e. g.*, drawing, mensuration, and applied mechanics.

The numbers at present are:

Boys	60
Girls	26
Total	86

Last term 87. Average attendance, 82 to 83.

The work of the highest classes reaches the standard of the junior scholarship examination of the University of New Zealand, for which this year there are 5 candidates from the school. Last year 8 candidates passed the New Zealand University matriculation examination, 2 of them taking the junior scholarship examination.

Five pupils are entering the engineering department of Canterbury College at the beginning of the next session.

In regard to physical training, both girls and boys receive formal gymnastic training from an instructor. The girls also have daily calisthenic exercises (Swedish and French drill). There is a cadet corps numbering 42. The boys also have senior and junior cricket and football clubs. Annual athletic sports and fives tournaments are held. The girls have a games club for tennis and other games, and hold one or two tournaments in each year.

WAITAKI HIGH SCHOOLS.

The Waitaki High School was incorporated in 1878. Its income from reserves amounts to £1,211, 4s. 9d. There are under its management a high school for boys and a high school for girls. The boys' high school is situated 2 miles north from Oamaru—the White City of New Zealand—so called because its buildings are of a white limestone, and the girls' high school is in the center of the town. This town is the center of a very rich agricultural district, and has a harbor constructed at considerable expense. The town is situated on the coast in the northern part of Otago, and it is beautifully laid out and is exceedingly healthy. There is a boarding establishment connected with each school. The work of the highest and lowest classes in both schools is as follows:

BOYS.

Highest.—Latin: Cæsar, Books I and II; Livy, Hannibalian War; Horace, Odes, Book III; Smith's *Principia*, Part II; Bradley's *Arnold*, all; Bryan's *Latin Prose*. Mathematics: Arithmetic, all; algebra, Hamblin Smith's to quadratic equations; Euclid, Books I to VI; trigonometry (Todhunter). English: Morris's *Historical Outlines of Grammar*; Bain's *Higher English Grammar*; Macmillan's *Sixth Reader*; Hewitt's *Manual of our Mother Tongue*. Geography: Longman's *Australasian Geography*. History: Buckley's *English History*. Science: Hooker's *Botany*. Drawing: Freehand, with perspective and machine (two hours weekly). French: Molière's *Misanthrope*, *Les Precieuses Ridicules*; Macmillan's *Second Reader*; Chardenal's *Third Course*.

Lowest.—Via Latina, Exercises 1 to 30; Public School Latin Primer. Mathematics: Arithmetic to interest; algebra to division. French: Chardenal's *First Course*. Drawing: Freehand, (one hour daily). Science: Paul Bert's *Introduction*. English: Mann's *English Grammar*; Nelson's *Poetry Reader*. Geography: Petrie's *Geography with maps*. History: Gardiner's *English History*.

GIRLS.

Highest.—English: Mason's *Grammar*, pages 73, 126, 141, 171; parsing and analysis, Julius Cæsar, Tennyson's *Shorter Poems*, essays, paraphrasing, composition notes. Advanced (scholarship) work: Above class work, and, in addition, Morris's *Grammar* (selections), Brooke's *Primer of English Literature*, Pope's *Essay on Criticism*, Bacon's *Essays*, *Paradise Lost*, Book II; Chaucer's *Prologue to Canterbury Tales*. Latin: *Principia*, Part I, irregular verbs; Part IV, lessons and exercises; Parts I and IV, Cæsar's *Invasion of Britain*; Nepos, *Miltiades*, *Pausanias*, *Aristides*; (advanced)

Principia, Part IV, lessons and exercises, XXXIII to end; various, Sallust's *Bellum Catilinarium*, chaps. XXXVIII to end; Livy, Book II; Virgil's *Æneid*, Book I; Horace, odes, Book III; sight translation. Arithmetic: Problems in simple interest, compound interest, present worth and discount, profit and loss, stocks, mental arithmetic; (advanced) miscellaneous exercises on the whole subject. Algebra: Fractions, simple equations, problems involving simple equations; (advanced) Todhunter, exercises XXXI to XLI (involution to permutations and combinations). Euclid: Book I, pages 29 to 48; Books II and III, deductions; (advanced) Book VI; revise over Books I and IV; deductions. Trigonometry: Lock's Trigonometry, pages 1 to 108; (advanced) trigonometry, pages 117 to 245. Mechanics; Blackie's *Elements* (whole work). Chemistry: Miller's *Inorganic Chemistry*, pages 1 to 107; problems; (advanced) Miller's *Inorganic Chemistry*, pages 95 to end, group tests for metals, problems. French: Oxford and Cambridge grammar; (advanced) translations, various. English History: William III to present date. Roman History: *Elements* and antiquities. Geography: British Empire (Chisholm).

The following is a short history of the schools:

The first meeting of the governors of the Waitaki High School was held February 20, 1879. After much consideration, in July, 1879, it was decided to select as a site for the boys' high school a portion of land set aside as one of the reserves, distant about a mile from the town boundary. Thirty acres were allotted for school purposes, the remainder to be sold for revenue.

A bonus of £20 was offered for the best design for school buildings to be erected in stone, the total cost when completed not to exceed £5,000, the present portion to be erected not to cost more than £2,500. Messrs. Forrester and Lemon, of Oamaru, architects, were the successful competitors. The contractors for stonework were Messrs. Wilson and Roxburgh and for woodwork Mr. H. Sidon.

The foundation stone was laid October 12, 1881, by the Hon. Mr. Shrimski, U. L. C., by whom the bill vesting the endowments in a board for the purposes of secondary education was introduced into parliament.

In January, 1882, it was arranged through the courtesy of the Government that the agent general associate himself with the 2 other commissioners for the purpose of selecting a head master, 1 of them to be a professor of Oxford and Cambridge, the other a professor of Edinburgh and Glasgow.

Mr. John Harkness, M. A., was chosen out of a great number of applicants.

In order to obtain funds for the erection of the building, a temporary loan of £3,500 was effected.

The schoolhouse is a large and handsome building of Oamaru stone with an ornamental frontage of 130 feet, providing accommodation for 50 boarders. It contains three large dormitories, four class rooms, a master's common room, a boy's dining room and reading room, besides the accommodation of the rector's house. A portion of the 30 acres has been made into cricket and tennis grounds. A fives court and gymnasium have also been erected.

The climate of the district is exceedingly good, being dry and bracing.

The tuition fees are 10 guineas per annum; for brothers, 8 guineas; but scholars from the primary schools in the county of Waitaki are at £4 10s. per annum; for brothers £3 3s. per annum. The year is divided into three terms.

The position of second master at the commencement of the school was secured by Mr. A. C. Gifford, B. A., of St. John's College, Cambridge. There were 15 applicants.

Financial assistance was rendered the board (in order to enable it to provide scholarships) by the Hons. H. J. Millar and Robert Campbell, Mr. Shrimski, M. H. R., and by Messrs. John Reid and George Jones, jr.

The boys' high school was opened May 15, 1883, 19 pupils being in attendance. In about four years the number had reached 62; the average attendance has been about 40. Many boys from outside the district attend as boarders.

The Waitaki Girls' High School was established in October, 1887, in response to a strongly expressed wish of the community that there should be a secondary school

in Oamaru for girls as well as for boys. The Waitaki County council kindly granted the use of the county council building in exchange for the custom-house, which the government had granted to the Waitaki high school board, the former building being in a much better locality for the school. The government also granted a portion of a reserve for a playground.

Mrs. Burn, who had for fourteen years been lady principal of the Otago Girls' High School, Dunedin, but who had retired from that position in 1884, was offered and accepted the position of lady principal. The school was opened October 19, 1887, with 9 pupils, Mrs. Burn conducting it alone till the end of the year. In February, 1888, 27 pupils were entered on the school roll, and Miss Forbes, M.A., of New Zealand University, was elected first assistant.

The full high school course of study was then inaugurated. In 1889 the pupils reached 47 in attendance and a second assistant was appointed. At the end of the second year, 1889, one pupil was sent up for the matriculation examination of the New Zealand University and passed. One was sent up for the Otago education board senior scholarship examination and was successful in securing one of the scholarships. In the third year, 1890, the number of pupils was 37. In that year the standard of New Zealand University junior scholarship was reached. One girl was sent up for the examination and passed with credit, thus giving proof of the high character of the work done in the school. In 1891 the school in common with all the secondary schools in the colony suffered in its attendance, but still maintained its character for high-class work.

The course of study includes English, French, Latin, mathematics, science, drawing, drill, and class singing. Tuition fees are £8, sisters, £6 per annum, divided into three terms.

Both of these schools were established by act of parliament, the intention being that they should form a connecting link between the primary schools and the universities.

Although changes have taken place in the teaching staff, both schools have been under the superintendence of the same head teachers since their inauguration and are still under the management of a board of governors.

An endowment of about 2,000 acres was set apart by parliament in the county of Waitaki for the purpose of the board. A considerable portion of the money borrowed for the erection of the school buildings has been paid off out of the proceeds of sales of portion of the reserves referred to.

OTAGO BOYS' AND GIRLS' HIGH SCHOOLS.

The Otago Boys' High School has all along been doing very good work, and has sent out a very large number of youths who in their various walks of life have done and are doing infinite credit to themselves and to the school. That is owing in no small degree to the zeal and loyalty of Mr. Brent and the other able masters employed in the school.

The present buildings were opened by his Excellency Sir William Jervois, governor of New Zealand, on February 11, 1885 and occupy a most suitable and commanding position adjoining the town belt. The plan of the building is that of a main central hall, around which are grouped the several class rooms. The central hall is 74 feet long by 43 feet in width and is 30 feet in height, with a gallery carried around both sides and ends. The several class rooms both on the ground and upper floors are very spacious, lofty, carefully ventilated, and fitted with all requisites and appliances to suit their purposes. The drawing school has been constructed on the most approved system, and is fully

furnished with models, plaster casts, and other materials of the art. The science room is supplied with requisites for the teaching of practical and theoretical chemistry and metallurgy. It also contains accessories to the teaching of physiology. The mathematical school has been excellently constructed for its purpose both as regards light and contrivances for demonstration. The gymnasium has been furnished on the exact model of that at Aldershot, and ranks among the best equipped in the colony. The grounds on which the school buildings are erected cover an area of about $6\frac{1}{2}$ acres; a large space around the school has been asphalted, and is occupied by five courts, tennis courts, etc. There is also a large cricket field adjoining the school grounds.

The rector's residence and the janitor's lodge are near the school. The public of Otago are indebted to the influence and untiring efforts of Sir Robert Stout for having secured to them so suitable and so valuable a site for the boys' high school. The boarders' house, under the superintendence of Mr. Morrison, English master, is situated about five minutes' walk from the school, and occupies one of the finest sites in Dunedin. It is surrounded with recreation grounds covering an area of about 7 acres with commodious play sheds and asphalt tennis court, etc. The building was designed expressly for the purpose of a boarding institution for the high school boys, and the equipments are very complete and in every way suitable.

The board of governors is incorporated under an act passed in 1877, and consists of the mayor of Dunedin *ex officio*, two gentlemen appointed by the governor in council, two appointed by the education board, and two appointed by the Otago University. The following are the present members of the board:

Rev. D. M. Stuart, D. D., chairman; Geo. Grey Russell, esq., honorable treasurer; the Hon. W. H. Reynolds, M. L. C.; Rev. A. R. Fitchett, M. A.; Henry Clark, esq.; John Hislop, LL. D.; his worship the mayor of Dunedin; Colin Macandrew, esq., secretary.

The staff of the school is as follows:

Rector.—The Rev. Henry Belcher, M. A., LL. D. (fellow of Kings College, London).

Masters.—Mechanics: Daniel Brent, M. A., Cambridge, formerly senior scholar of Queen's. English: W. Buller Williams, B. A. (London and Bonn), honors in German and English. Classics: M. Watson, M. A., Edinburgh, first-class honors in Lit. Hum.; Gray University scholar. Modern languages: The rector. Science: G. M. Thomson, F. C. S. Writing and drawing: Robert Anderton, first-class certificate in drawing of the science and art department, South Kensington. Arithmetic and lower master: John Macpherson, F. E. I. S. Assistant in the upper school: John R. Montgomery, M. A., junior university scholar, New Zealand. Assistants in the lower school: Vacant. Art master: David C. Hutton, principal of the school of arts. Assistant art master: David E. Hutton, assistant in the school of art. Gymnastics: John Hanna, late instructor Scots Guards. Manager of the boarding house: G. M. Thomson, F. C. S. Assistant: J. R. Montgomery, M. A. Janitor: John Wallace.

The school consists of two departments: (a) The upper school; (b) the lower school.

The classification of subjects is such that on entering the school a boy

is at no disadvantage if he has not commenced the study of languages or mathematics. His place is determined by his standard attained at a primary school, or by an equivalent test if he has not attended a primary school.

The upper school prepares boys for the university, for the learned professions, and all public examinations.

Boys who are studying for the science degrees of the university, or for the profession of engineer, or for any other calling in which a knowledge of Latin is not compulsory, may omit the subject of Latin.

The rector will always do his best to meet the special requirements of boys whose school time is drawing to a close, but in ordinary cases the school curriculum is strictly followed. The rector can always make arrangements for a boy who wishes to learn Greek.

Drawing is taught in all classes below the lower v class. The drawing school is constructed on the most improved system, and fully furnished with models, plaster casts, and other materials of the art.

The science school is supplied with requisites for the teaching of practical and theoretical chemistry and metallurgy. It also contains accessories to the teaching of physiology.

The mechanical school is constructed for its purpose, both as regards light and contrivances for administration.

The gymnasium is furnished on the exact model of that at Aldershot, and ranks among the best equipped gymnasiums in the colony. Gymnastics, according to an approved course, form a part of regular school studies.

The lower school is under the immediate charge of the arithmetic master, who is responsible for this department, and in conference with the rector, pays close attention to all the details of management.

A lecture is given weekly to the lower boys on physiography, heat, or some scientific subject.

The boarders' house is specially fitted up for the accommodation of boarders. It is situated about five minutes' walk from the high school, occupies a fine position adjoining the town belt, and is surrounded by extensive recreation grounds. The rooms are lofty, well ventilated, and arranged with a view to the health and comfort of the pupils, who are at all times under strict control and superintendence.

The fees per quarter are as follows:

	£	s.	d.
Education		2	10 0
Full board and education	13	10	0
Weekly board and education	12	2	8

There is a scholarship tenable only for boys of this school, of which the regulations, taken from the Otago University calendar, are given below. The trustees are the high-school board. School fees are not charges to any boy who attains more than 50 per cent of the marks awarded at the annual examination for the senior provincial scholar-

ships of the Otago educational board, but does not win a scholarship. Free boys, however, are charged 10 s. per annum stationery money.

GRAY RUSSELL SCHOLARSHIP, FOUNDED IN 1882 BY GEORGE GRAY RUSSELL, ESQ.

REGULATIONS.

(1) The annual value of the Gray Russell scholarships shall be £40 and is tenable for three years.

(2) The scholarships shall not be held concurrently with any other scholarships offered by the University of New Zealand or founded in connection with the University of Otago, or the Otago High School.

(3) The scholarships shall be open to candidates between the ages of 16 and 19 years, who shall have attended the Otago Boys' High School for at least one school year immediately preceding the competition for the scholarships, and shall also have matriculated at the University of New Zealand.

(4) The examinations for the Gray Russell scholarship shall be held previous to the commencement of the session of the Otago University and shall be of the same character and under the same conditions in respect of subjects and marks as that prescribed for junior scholarships in the University of New Zealand, and the scholarships shall be awarded to the candidate who shall have gained the highest aggregate number of marks, provided that he have obtained at least 40 per cent of the total aggregate marks allotted to the subjects which he has taken up.

(5) Candidates shall be required, at least one month before the date fixed for the examination, to intimate in writing to the secretary to the high-school board the subjects in which they desire to be examined.

The work of the highest and lowest classes is as follows:

Highest.—Latin: University scholarship standard—Livy, Tacitus, Cicero; selections for unseen translation; grammar and composition. French: Same standard—selection for unseen translation; grammar and composition. German: Same standard—selections for unseen translation; grammar and composition. Usually in these languages some definite book is selected for exact study. English: Same standard—exact study of a play of Shakespeare (in 1890, Macbeth), and of a piece of older English literature (in 1890, Piers the Plowman). Mathematics: Geometry; Euclid, Books I to VI, with exercises; algebra to the binomial theorem; trigonometry to solution of triangles inclusive; mechanics, elementary, not involving a knowledge of higher mathematics. Science: Chemistry of the metals and nonmetals; practical work, assaying, elementary metallurgy. Arithmetic: The customary complete course.

Lowest.—Latin: To and inclusive of the simplest forms of verbs. English: Reading easy analyses; paraphrasing; dictation. Geography of New Zealand and Australia. History of England, outlines from 1066 to 1688. Drawing: Freehand. Penmanship. Arithmetic: To and inclusive of easy simple fractions; tables and money.

N. B.—Gymnastics: Included within the weekly time-table. Junior classes attend the gymnastic master twice a week; senior classes, once a week.

Free education was given last year to holders of scholarships from the Otago education board and also to candidates at the scholarship examinations who gain 50 per cent of the attainable marks. The number for the year was 37. Free education was also given to two boys who held scholarships from the Auckland education board and to one from the Westland education board.

The Otago Girls' High School was incorporated by the same act as the boys' high school, and is managed by the same board of governors. The school is a substantial brick and stone building situated in Dowing street, Dunedin. There is a boarding establishment connected

with the school under the management of Mrs. E. R. Mackay. The following is a short sketch of the history of the school:

The Otago Boys' High School was opened in August, 1863. About a week afterwards (August 11) an ably-written leading article on the subject appeared in the Otago Daily Times. After dealing with the subject of the boys' school in a very appreciative manner the writer proceeds as follows; "The high school, however, wants a companion institution. There is one direction in which we have attempted little and done less to promote the best interests of education and of families; we mean in the provision made for the education of girls, especially after they have arrived at an age when it is untasteful to their friends and obviously unwise that they should remain in the mixed common school." Then follow some well put arguments in support of the proposal to establish a girls' high school and the article concludes as follows: "It is to be hoped that a high school for girls will be promptly organized in Dunedin." A day or two afterwards, a letter appeared in the Daily Times over the signature "Paterfamilias," thanking the editor for his sensible and well-timed article and suggesting that pressure should be brought to bear upon the government to take steps for the establishment of the proposed school with the least possible delay. This was the first occasion on which the proposal to establish a girls' high school in Dunedin was publicly discussed, and it is only due to the Otago Daily Times that this fact should not be lost sight of, but before and after the publication of the article referred to the subject received careful consideration from the education authorities, and it was fully resolved that a girls' high school should be established as soon as the difficulties that interposed should be removed; the chief of these being inability to procure a suitable site and building for the purpose. In the provincial council on November 4, 1864, Maj. Richardson moved the following resolution, of which notice had previously been given by Mr. Reynolds:

"(1) That it is expedient to give encouragement to the education of girls beyond that afforded by the ordinary district schools; and

"(2) That the government be requested to submit to the house during the next session some scheme by which this result could be obtained."

The subject continued to receive consideration from time to time, but nothing definite was done until June, 1869, when on the motion of Mr. J. L. Gillies it was resolved by the provincial council "that the government be requested to appoint an honorary commission to determine the best site and scheme for a high school, and to consider whether it is expedient that provision should be made in the same building for the teaching of girls as well as boys." The commission consisted of the following members: The Rev. Dr. Stuart (chairman), Mr. Justice Ward, the Hon F. D. Bell, and the following members of the provincial council: Messrs. Reynolds, Turnbull, McIndoe, McLean, Reid, Haggitt, Duncan, Gilles, and Mouat.

In addition to other documents, the commission had before it a letter and papers received from a committee of ladies in Otago, who greatly interested themselves in the proposed establishment of a girls' high school. The late Mrs. E. B. Cargill was president of the committee, and Miss Dalrymple was its most indefatigable secretary. The committee expressed its deep obligation to the ladies' committee and to Miss Dalrymple, and embodied in its report a number of the recommendations made to them. The commission recommended that the rector's residence and boarding establishment should be removed to another locality, and that the rooms to be vacated, together with such additional accommodation as might be found necessary, should be occupied as a girls' high school, a residence for the lady principal, and a boarding house for girls from a distance, and that the other portions of the building should be enlarged and adapted to the purposes of a boys' high school.

On the opening of the school under Mrs. Burn at the end of 1870, the several additions and improvements recommended by the commission were completed, and the education board was placed in a position to open the girls' school and to organize it

in accordance with the commission's recommendations. Mrs. M. Gordon Burn, formerly lady superintendent of Geelong Girls' College, was appointed lady principal, and the following teachers were also engaged: Miss Macdougall (now Mrs. Neish), first assistant; Mrs. Rhind, resident governess; Miss Huie (now Mrs. Borrow), resident music governess, and Miss Bell (now Mrs. McGlashan) and Mr. Lees, visiting music teachers. The services of Mr. D. C. Hutton as drawing master were secured, and these have been continued ever since. Mr. G. M. Thomson rendered valuable service for some years as conductor of the class singing lessons. It was also arranged with the rector that the masters of the boys' school should give lessons in some of the higher subjects to classes in the girls' school.

The prospectus issued by the board set forth that the object of the institution was to impart to girls a thoroughly useful and liberal education, combined with careful moral and religious instruction; that the ordinary course would embrace a thorough English education, viz, reading, grammar, composition, elocution, history, natural science, geography, writing, and arithmetic, and also class singing, drawing, French, and industrial work, and that competent teachers would be engaged for music, singing (private lessons), dancing and calisthenics, German, and other branches that might afterwards be found desirable. The school was opened on February 6, 1871, with a roll of 78 pupils. By the end of the quarter there were 102 in attendance, and at the close of the year there were 130 names on the roll, including 16 boarders. It was now found necessary to enlarge the school buildings both for day-school and for boarding-house purposes. In 1872 the number enrolled was 125. In the beginning of 1873 it was found advisable to discontinue the arrangements under which some of the masters of the boys' school gave lessons to the senior classes in the girls' school and to transfer the services of Mr. Pope wholly to the latter. The number on the school roll at the end of 1873 was 137 and the average for the year 126. In 1874 the attendance had increased to 155, and the accommodation again became insufficient. The number of pupil boarders had increased to 24 and want of room compelled Mrs. Burn almost every week to decline receiving more girls. The board was therefore under the necessity of again making considerable additions to the building. Mrs. Burn had thrown so much energy and zeal into the performance of her onerous and responsible duties that she somewhat overtaxed her strength and towards the end of 1874 the board asked her to accept leave of absence for a few months. A temporary substitute was engaged and the work of the school was satisfactorily carried on. In 1875 the average quarterly enrollment of pupils rose to 168. The number of girls receiving music lessons in connection with the school was 77. As the upper division of the school became more and more composed of pupils who had been trained in the lower classes, a higher standard of attainment began to be reached than was at first possible. In course of time the work devolving upon the lady principal consequent upon the increasing number of day scholars and pupil boarders became so onerous that, in response to her own proposal, the board resolved to relieve her of the care of the boarding establishment, so that her time and energies might be confined solely to the superintendence of the day school. Mrs. Martin was accordingly placed in charge of the boarding house in July, 1876, Mrs. Burn giving up the occupation of the official residence. Mrs. Martin continued to preside over the boarding department until the beginning of 1878, when the board of governors that had been appointed under the high-school act of 1877 reverted to the original arrangement and placed Mrs. Burn in charge of the boarding institution as well as the day school. Under the board of governors the school continued to prosper as in former years, the only difference being the occasional inability of Mrs. Burn's strength to bear the strain imposed upon it by the energy and zeal in the performance of her weighty and responsible duties. With a view to reduce the strain, the board of governors in 1883 resolved to secure the services of a highly-qualified vice-principal, who should also act as mathematical teacher, and Sir F. D. Bell and Prof. Sidgwick, of Trinity College, Cambridge, were requested to make a suitable selection in the home coun-

try. Their choice fell upon Miss J. J. McKean, who entered upon her duties in November, 1883, and has ever since performed them in a highly satisfactory manner. In 1884 Mrs. Burn was compelled by the state of her health to resign the lady principalship. It is very generally admitted that from first to last Mrs. Burn performed the duties of her office with rare ability and with a devotion and zeal that could not be surpassed and that under her superintendence the Otago Girls' High School proved an uninterrupted success. The following is an extract from the inspector-general's report on the school about the time of Mrs. Burn's retirement: "December 1, 1884: The Otago Girls' High School, which I visited on 17th of September, maintains its high character for efficiency. Mrs. Burn, who has conducted it for so many years with distinguished ability, is about to retire."

MR. ALEX. WILSON, M. A.

On Mrs. Burn's retirement the board of governors invited Mr. Alexander Wilson, M. A., to accept the rectorship of the girls' high school. Mr. Wilson had for many years greatly distinguished himself as English master of the boys' high school and on the occasion of Dr. Macdonald's absence in 1884 had fulfilled the duties of acting rector of the boys' high school with much ability and success. Miss Bathgate was at the same time placed in charge of the boarding institution. Under Mr. Wilson and his very efficient staff the girls' high school has well maintained its high character in all respects. The average attendance has been 190.

BUILDINGS.

On the removal of the boys' high school in February, 1885, to the new buildings in Arthur street, the whole of the premises in Dowling street were given up to the girls' high school. The buildings are extensive and commodious and are situated in a healthy and central locality, easily accessible from all parts of the city and suburbs. The main building contains a spacious central hall, in connection with which are a number of class-rooms well furnished and adapted to the purposes of the school. Ample and suitable accommodation is provided for the lady manager of the boarding establishment, the resident governess, and a number of pupil boarders. The girls' bedrooms are large, well lighted, and well ventilated, and are exceedingly comfortable. Each boarder occupies a separate bedroom. There are six bathrooms with shower baths and hot and cold water laid on. Every possible requirement for an institution of the kind seems to have been provided, and everything has been arranged with a view to the health and comfort of the boarders, who are at all times under strict control and superintendence. The boarding department is under the direction of Miss Bathgate, a lady of high character and much experience. The recreation grounds cover an area of fully 2 acres, very completely fenced, within which there are tennis courts, a fives court, play sheds, a large and exceedingly well-equipped gymnasium, etc.

The following is the teaching staff:

Rector.—Alexander Wilson, M. A.

Vice-principal.—Miss J. J. McKean.

Teachers.—English: The rector and Miss M. J. Fraser, M. A. French and German: The rector and staff. Latin: the rector and Miss F. M. Allan, M. A. Mathematics: Miss J. J. McKean. Science: G. M. Thomson, F. L. S. Assistants: Miss E. C. Little and Miss M. Alves. Drawing: Miss Fanny M. Wimperis. Gymnastics: John Hanna.

Teachers of extra subjects.—Music (piano): Miss T. White, Madame Muller, Miss E. Pratt. Singing (private lessons): Miss T. White.

The boarding establishment.—Lady manager: Mrs. E. R. Mackay. Janitor: Alexander Hay.

The course of study for the present year is as follows:

SIXTH FORM.

English.—Chaucer, The Nonne Prestes Tale; Shakespeare, Much Ado; Milton, Paradise Lost, Book II; selections from prose writers, 1490 to 1684; Roman History, The Later Republic; Historical English Grammar; Composition, etc.

Latin.—Virgil, Georgics, Book IV; Æneid, IV, 11, 500; Cæsar, Gallic War, Book II; Livy, Siege Syracuse. Advanced section, in addition: At sight translation, Livy, Book I; Horace, Odes, Book II, part of Book III; composition, grammar, etc.

French.—Sanitine, Picciola; Boicelle, poetry; grammar, etymology, composition, etc.

German.—Macmillan's First German Course.

Mathematics.—Arithmetic, the whole subject; algebra, to permutations and combinations, inclusive; geometry, Euclid, division A, Books I, II, III, IV, VI; division B, Books I, II, III.

Trigonometry.—Division A, Lock's Trigonometry; division B, Lock's Trigonometry, Chap. I, XI.

Science.—Botany: The morphology and physiology of the botanical types specified in the junior scholarship schedule.

Chemistry.—The metallic elements; revision of the nonmetallic elements. The senior division have revised the whole of inorganic chemistry.

FIFTH FORM.

English.—Selections from prose writers, 1684 to the present time; Shakespeare, Julius Cæsar; English history, William III to Victoria; geography, Australasia, North and South America; physical geography, seasons, winds, etc., mathematical geography, historical English grammar, composition.

Latin.—(Class B), Heatly, Excerpta Facilia; Ovid, Selections; composition and grammar.

French.—Sans Famille; composition and syntax (Chardenal, Part II), accidence.

Mathematics.—Simple and compound interest, profit and loss, proportion (parts, Stack's). Algebra: Division A, to quadratic equations; division B, to fractional equations.

Geometry.—Division A, Books I, II, and III; division B, Book II; prepositions, 1-7.

Science.—Inorganic chemistry; the nonmetallic elements.

FOURTH FORM.

English.—Relf's Sixth Reader, Miss Wood's Second Poetry Book; English history—Henry VII, Charles I; geography, North and South America, Africa, part of Asia; mathematical geography, grammar, composition, etc.

Latin (beginners' class).—Accidence, with exercises.

French (class C) division I.—Children's Own French Book: Chardenal, part I.

Mathematics.—Revisal of compound proportion, decimals, percentage, profit and loss, simple and compound interest. Algebra: As far as simple equations and easy factors. Geometry: Book I, 1 to 23.

Science.—Physics, Balfour Stewart's Primer. Chemistry: Introduction to Inorganic Chemistry.

THIRD FORM.

English.—Longman's Sixth Reader, Ashby's Lyrics; English history, William I to Henry VII. Geography: Europe. Physical geography: Motions of the earth, etc.

French (class D, beginners).—Accidence, with exercise; easy translation.

Mathematics.—Vulgar fractions, practice, simple and compound proportion.

Science.—Structure of flowering plants.

SECOND FORM.

English.—Longman's Fifth Reader. History: William I to Richard II. Grammar and composition.

Geography.—New Zealand, British Isles, and Continent of Europe.

French.—Chardenal's First French Course.

Arithmetic.—Compound rules in all tables, practice, bills of parcels, mental arithmetic.

FIRST FORM.

English.—Longman's Fourth Reader. History: Blackwood's short series.

Geography.—Australasia, chief oceans, seas, etc. Physical geography: Explanation of geographical terms, etc.

Grammar.—Simple analysis and parsing.

Object lessons.—Simple lessons on common objects with a view to subsequent composition on the subject of lesson.

French.—Chardenal's First French Course.

Arithmetic.—Simple and compound rules in money, simple problems, mental arithmetic.

DRAWING.

Upper school drawing.

Easel work.—Painting in oils: Jars, drapery, and other objects of still life; flowers from nature; copies of heads. Painting in monochrome: Casts. Chalk drawing: Casts, drapery, geometrical objects, copies of carton heads.

Copy book work.—Pencil drawing: Exercises in elementary perspective; Poynter's "Outlines of human figure;" outline from nature.

Fifth form.—Pencil drawing: Outlines of geometrical figures; shading of solid objects; elementary perspective exercises; Poynter's Free-hand.

Fourth form.—Pencil drawing: Outlines of geometrical and other objects; Poynter's Free-hand; elementary perspective.

Third form.—Pencil drawing: Outlines of objects; Poynter's Free-hand; Blair's Outlines.

First and second forms.—Pencil drawing: Outlines, etc., from blackboard.

Pupils entering this school from the State schools are classified according to their attainments in English and arithmetic. Arrangements exist by which pupils who up to the time of entering the school have confined their attention entirely to the work of the standards may begin such secondary subjects as higher English, Latin, French, mathematics, and science. At the commencement of each session a beginners' class is formed for Latin and French, and to any pupils who make exceptional progress an opportunity is given later in the session of joining a more advanced division.

Those who join the first form are expected to be able to read and spell fairly well and to know the four simple rules of arithmetic.

In connection with the science class there is a fully furnished laboratory supplied with apparatus for practical chemistry, as well as with microscopes for higher botanical work.

An art studio has been fitted up with the necessary appliances (easels, models, pottery) and has been placed under the charge of Miss Fanny Whimperis. The art course includes freehand, outline, and perspective drawing, and for more advanced pupils studies in chalk, monochrome, water colors, and oils. Such pupils, besides their special hours of instruction, are allowed to work in the studio during certain hours of every school day under the supervision of Miss Wimperis.

There is a large and well-equipped gymnasium attached to the school and the pupils have two lessons weekly in gymnastics. Too much emphasis can not be laid

on the opportunity to girls attending the school of receiving a systematic and complete physical training. In order to take full advantage of the gymnastic training it is necessary that each pupil should be provided with a special gymnastic dress.

The school is provided with a library containing upwards of 600 volumes of useful and entertaining works, which is open to pupils on payment of an annual subscription of 2s. 6d.

Reports are sent quarterly to the parents and are intended to assist them in judging of the progress that has been made by their children during the quarter.

At the end of the session, class prizes and certificates of merit are awarded to the most distinguished pupils.

When any pupil has been absent, she must, on her return, produce a note signed by a parent or guardian explaining the cause of absence, and no pupil is allowed to leave during school hours without a note.

The quarter days are February 1, April 19, and September 27.

There are vacations of seven weeks at Christmas and of two weeks at midwinter.

The terms per quarter are as follows:

	£	s
Day pupils (above first form)	2	10
Day pupils (first form)	1	1
Pupils who desire to take one or two subjects without entering for the whole school course may do so at a fee of £1 1s for each subject.		
Resident boarders (including laundry, but exclusive of day school fees)	10	0
Weekly boarders (without laundry)	8	5
Day boarders	2	10

Extras.

Piano:

Mrs. White (two 40 minute lessons per week)	2	2
Madame Muller		
Miss E. Pratt		

Arrangements may be made for singing lessons.

The income of the Otago high schools, received from reserves and interest on money invested and on unpaid purchase money, amounts to £3,145 13s. 2d.

THE SOUTHLAND HIGH SCHOOL.

The Southland Boys' and Girls' High School is situated at Invercargill and was incorporated by an act of the general assembly in 1877. The board of governors consists of the mayor of Invercargill *ex officio*, two persons appointed by the educational board of Southland, and two appointed by the governor in council. The following letter from the secretary of the board contains a short sketch of the school:

The girls' school was established in the beginning of the year 1879, with 57 pupils on the roll.* At this time the work of the school was carried on in a public hall, pending the erection of school buildings. In 1880 a substantial brick building was erected and a boys' school was opened in 1881, both schools being carried on in the same building. These schools opened with 45 boys and 55 girls. During the last few years the district has been passing through a severe commercial depression and the numbers on the rolls at the end of 1891 were 22 girls and 46 boys. The number has increased this term and it is expected it will steadily increase as the cloud is being removed and a more prosperous period is evidently dawning upon us.

The staff of teachers comprises a head master, having control over both schools, with two assistant teachers on each boys' and girls' side.

In the girls' school the usual branches of a first class secondary education are taught. In the boys' school parents and guardians may choose between a classical and a commercial course. A well arranged chemical laboratory has lately been erected, with complete apparatus and chemicals, and instruction in this branch is imparted to both schools.

The work of the highest and lowest classes is as follows:

BOYS.

Highest.—Latin: Livy, Book XXII: Horace, Odes, Books II and III; Bradley's Arnold; grammar, prose, unseen translation. French: Racine, *Athalie*; Le Misanthrope; grammar, prose, unseen translation. English: Morris's Historical Grammar, Brooke's English Literature, Shakespeare's *As You Like It*, Milton's *Paradise Lost*, Book II; composition, and essays. History: English (Ransome), Rome (Creighton). Mathematics: Arithmetic, the whole subject; algebra to the binomial theorem; Euclid, Books I to IV, and the definitions of Books V and VI; trigonometry, to end of solution of triangles (H. Smith). Natural science: Roscoe's Chemistry of the Metals; Tilden's Practical Chemistry, Heat, Mechanics.

Lowest.—Work equivalent to standard V of the primary schools.

GIRLS.

Highest.—Latin: Caesar, Books II and III; Bradley's Arnold, exercises 15 to 49; grammar, unseen translation, and prose. French: Racine's *Athalie*, Moliere's *Le Misanthrope*, grammar, unseen translation, and prose. English: Morris's Historical Grammar, Brooke's English Literature, Shakespeare's *As You Like It*, Milton's *Paradise Lost*, Book II; composition and essays. History: Ransome's History of England. Geography: Longman's Geography. Mathematics: Arithmetic, the whole subject; algebra, to end of quadratic equations; Euclid, Books I to IV; trigonometry, introductory chapters (H. Smith). Natural science: Roscoe's Chemistry of the Nonmetallic Elements. Plain sewing.

Lowest.—Work equivalent to standard IV of the primary schools.

This school has an income from reserves and endowments amounting to £1,038 0s. 1d.

UNIVERSITIES.

The first university founded in New Zealand was the Otago University, founded and incorporated by ordinance of the superintendent and provincial council of Otago in 1869. It was given power of granting degrees in arts, medicine, and law, and received a large grant of land. In 1872 it received a further endowment to aid its medical school. It opened in 1871 with 3 professors. It now has 9 professors and 19 lecturers. The following is a list of the professors:

Classics.—G. S. Sale, M. A., Cambridge.

Mathematics.—F. B. De M. Gibbons, M. A., Cambridge.

Natural philosophy.—J. Shand, M. A., LL. D., Aberdeen.

Natural science.—W. Salmond, D. D., Edinburgh and Glasgow.

Chemistry.—J. G. Black, M. A., D. SC., Edinburgh.

Biology.—T. J. Parker, D. SC., London, F. R. S.

English language and literature.—T. Gilray, M. A., Edinburgh.

Mineralogy.—G. H. F. Ulrich, F. G. S., graduate of the Royal School of Mines, Claustal Hartz.

Anatomy and physiology.—J. H. Scott, M. D., Edinburgh M. R. C. S., England F. R. S. E.

The lecturers are as follows:

- Geology*.—A. Purdie, M. A.
French.—A. Dallas, University Gallic.
German.—W. B. Williams, B. A., London.
Jurisprudence.—A. Holmes, B. A., Oxford of the Middle Temple, barrister at law.
Law of property.—W. A. Stout, B. A., LL. B.
Constitutional history and law.—A. R. Barclay, B. A., LL. D.
Surgery.—William Brown, M. A., C. M.
Practice of medicine.—D. Colquhoun, M. D., London; M. R. C. P., London; M. R. S. S., England.
Pathology.—W. S. Roberts, M. R. C. S., England.
Midwifery and diseases of women.—F. C. Batchelor, M. D., Durham; M. R. C. S., England; L. R. C. P., L. M. Edin, L. S. A.
Materia medica.—J. McDonald, L. R. C. P. and S., Edinburgh; L. M. R. C. S., England; L. S. A.
Medical jurisprudence and public health.—F. Ogston, M. D., C. M., Aberdeen.
Ophthalmology.—H. L. Ferguson, F. R. C. S., Ireland; L. K. Q. C. P., Ireland.
Diseases of children.—I. De Zouche, M. D., Queen's University of Ireland; M. R. C. S., England.
Clinical medicine and clinical surgery.—The honorary staff of the Dunedin Hospital.
Metallurgy, assaying, and blowpipe analysis.—D. Wilkinson, A. R. S. M., F. C. S.
Applied mechanics.—J. Thomson, B. E.
Mine and land surveying.—M. Begg.

In 1874 it ceased to grant degrees and became affiliated to the New Zealand University. It has the only medical school in New Zealand.

In 1870 a New Zealand university act was passed. It provided for a university managed by a council and a senate; a council of 20, of whom 12 shall be laymen. The senate was to be constituted when the graduates numbered 20, and should then consist of the graduates. Colleges could be affiliated and degrees in art, medicine, laws, and music conferred. No religious test was to be administered. It was to be a teaching body employing professors. If the Otago University agreed to dissolve and give its reserves to the New Zealand University the New Zealand University was to be established in Dunedin. Agreement had to be made within six months, but the New Zealand University did not meet in time to allow the agreement to be made. Ultimately it was agreed that the New Zealand University should be an examining and scholarship and degree-granting body, and this agreement was embodied in the 1874 act. Two royal charters have been granted to the university—one in the year 1876 and the other in 1883. These charters give power to confer the following degrees: Bachelor and master of arts, bachelor and doctor of law, medicine, music, and science. The university is managed by a senate of 24 fellows, elected for life. There is a convocation consisting of graduates above the degree of bachelor, and all bachelors of two years' standing. It has no legislative power. The senate and convocation alternately fill up vacancies in the senate.

The Otago University has very substantial stone buildings. They are situated in Dunedin, on a considerable area of land. There are

two main buildings; one contains a class room for the professors of classics, English, physics, mathematics, and law. In this building there is also a library containing several thousand volumes. The offices of the university, with retiring rooms for professors, students, etc., are also placed there. In the other building there are a small medicine museum, dissecting rooms, a large chemical laboratory, and rooms for the various medical lecturers on science. There is also in a separate building a large laboratory for the school of mines, and provision is made for assaying and analysis of metals. There is also a museum open to the public which contains a very fine collection of New Zealand fauna and flora, metals, etc. It is managed by the professor of biology, and he has his lecture rooms adjoining. The Otago Institute has also a very fine scientific library.

The Canterbury College was founded by the superintendent and provincial council of Canterbury and endowed by that body in 1873. It is affiliated to the New Zealand University and has 6 professors and 4 lecturers as follows:

Classics.—F. W. Haslam, M. A., late scholar St. John's College, Cambridge.

English language and literature, history, and political economy.—J. M. Brown, M. A., late Snell exhibitioner, Balliol College, Oxford.

Mathematics and natural science.—C. C. H. Cook, M. A., late fellow St. John's College, Cambridge.

Chemistry and physics.—A. W. Bickerton, F. C. S., Associate and late Senior Queen's Scholar, Royal School of Mines.

Geology and botany.—G. W. Hutton, F. G. S., C. M. Z. S.

Modern languages.—W. Mitchell Clarke, M. A., Cambridge, Diplomi Univ., Paris.

Jurisprudence and law.—W. Izard, M. A., L. L. M., Cambridge, Barrister-at-Law, Inner Temple.

Music.—G. T. Tendall, Mus. Bac., Oxford.

Engineering.—R. J. Scott, M. I. M. E., A. M. I. C. E.; E. Dobson, M. I. C. E.

The Canterbury College has substantial stone buildings, which contain also a very fine hall, in which its library is situated. In a separate building there is a chemical laboratory. Under its control there is a public library, and in it there is a reference department containing 8,527 books. The circulating library has 13,820 books. The public library is in a separate building some distance away. Its museum is the best in the colony. The building is a very large stone one and stands at the entrance of Hagley Park. There is a school of arts, in which instruction is given in drawing and painting. This is in a separate stone building. There is also connected with it a school of agriculture at Lincoln, where there is a large farm managed by the students. It has the following staff:

LECTURERS.

Agriculture.—Vacant.

Chemistry, general, and physiological and physics.—G. Gray, F. C. S.

Natural science.—E. Wilkinson.

Veterinary science.—T. P. Hill, M. R. C. V. S., London.

Mechanics, land surveying, and bookkeeping.—C. E. Adams, B. Sc.

Examiners in practical agriculture.—John William Overton, Prebbleton; William Boag, Burnside.

The Auckland University College was founded in 1882, and has a statutory grant of £4,000 per year from the colonial parliament. It is affiliated to the New Zealand University, and has 4 professors and 1 lecturer, as follows:

Classics and English.—Charles Alexander Maclean Pond, B. A., London.

Mathematics.—William Steadman Aldis, M. A., Cambridge.

Chemistry and experimental physics.—Frederick Douglas Brown, honorable M. A., Oxford; B. SC., London, F. C. S.

Biology and geology.—Algeron Phillips Withiel Thomas, M. A., Oxford; F. L. S.

Music.—Carl Schmitt.

It is the only university college that has a professor of music.

The Auckland College has been rather at a disadvantage for buildings. It has two separate buildings, but these are, it is hoped, only temporary structures. As soon as the university is in funds no doubt new and more suitable buildings will be erected.

MATRICULATION AND JUNIOR SCHOLARSHIP EXAMINATIONS.

In order to ascertain the standard of education of secondary schools, it will be necessary to set out the matriculation and junior scholarship examinations. Secondary schools generally compete with each other for these scholarships, or, if they fail in scholarships, to obtain a position for their pupils in the list of merit.

The subjects for the matriculation examination are as follows:

1. English: Grammar and composition, with précis-writing.
2. Arithmetic: Fundamental rules, vulgar and decimal fractions, proportion, and square root.
3. Algebra: To simple equations inclusive, with easy problems.
4. Euclid: Books I and II.
5. Latin: Translation at sight of easy passages from Latin into English; translation of easy passages from English into Latin, and questions on grammar.
6. Greek: As in Latin.
7. French: As in Latin.
8. German: As in Latin.
9. History: History of England, from the accession of William III to the accession of Victoria.
10. Geography: Political and physical.
11. Elementary mechanics: The elements of statics, dynamics, and hydrostatics.
12. Elementary physics: Heat, sound, light, and electricity.
13. Elementary chemistry: The nonmetallic elements and the atomic theory.
14. Elementary biology: (The papers will contain questions on both zoölogy and botany, but candidates will not be required to answer questions in more than one of these subjects.) Zoölogy.—Elements of animal physiology. Botany.—Elements of the morphology of flowering plants, including the main characteristics of the chief native and introduced natural orders.

Every candidate shall be required to pass in at least seven subjects, except those who take Latin or Greek, who shall be required to pass in six subjects only. Every candidate shall be required to pass in English, arithmetic, and at least one of the following languages: Latin, Greek, French, German.

I. The junior scholarships shall be open to candidates who are between the ages of 16 and 19 on December 1 in the year in which they offer themselves for examination, and who have matriculated, and who have not carried on their studies at any

university college or university; and each scholarship shall be tenable for three years, except as herein otherwise provided.

II. Candidates for junior scholarships must state the schools at which they have been educated during the previous five years.

III. The junior scholarships shall be awarded at an examination to be held annually at the same time as the matriculation examination, and shall depend upon comparative excellence in any number (not exceeding five) of the following subjects: (1) Latin; (2) Greek; (3) English; (4) French; (5) German; (6) Mathematics; (7) History and geography; (8) Natural and physical science. The time allowed for each paper set in these subjects shall be three hours.

The following shall be the papers set:

(1) Latin:

- (a) The matriculation paper, in which shall be set, for candidates for junior scholarships only, additional and more difficult questions in grammar.
- (b) Translation at sight from and into Latin, including at least one piece of simple historical narrative, for translation into Latin prose, and questions on history to the death of Augustus, and on antiquities.

(2) Greek:

- (a) The matriculation paper, in which shall be set, for candidates for junior scholarships only, additional and more difficult questions in grammar.
- (b) Translation at sight from and into Greek, and questions on history to the fall of Corinth, and on antiquities.

(3) English:

- (a) The matriculation paper.
- (b) Paraphrase, illustration, and explanation of passages selected from the works of any of the standard English writers; general questions on etymology, grammar, and the use of words; also a short essay on some easily understood subject.

(4) French:

- (a) The matriculation paper.
- (b) Translation at sight from and into French of a more difficult kind than the exercises set in the matriculation paper.

(5) German:

- (a) The matriculation paper.
- (b) Translation at sight from and into German of a more difficult kind than the exercises set in the matriculation paper.

(6) Mathematics:

- (a) Arithmetic (the whole subject) and algebra to quadratic equations inclusive; also ratio, proportion, variation, the progressions, permutations, and combinations.
- (b) Euclid, Books I, II, III, IV, and VI, and plane trigonometry to solution of triangles, inclusive, with easy transformations and examples.

(7) History and geography:

- (a) The matriculation paper on history (see p. 40).
- (b) The matriculation paper on geography (see p. 40).
- (c) A paper on outlines of the History of England from the accession of Elizabeth, with especial reference to the colonies, and on geography, political and physical.

(8) Natural and physical science. Any two of the following:

- (a) Chemistry. The chief physical and chemical characters of the following elements, and of their more important compounds: Oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluo-

rine, sulphur, phosphorus, silicon, sodium, potassium, calcium, magnesium, zinc, aluminium, iron, manganese, chromium, lead, silver, copper, mercury, tin, gold, platinum. The laws of chemical combination. Equivalents. The atomic theory. Atomic values (valency). The general nature of acid, bases, and salts. The elements of qualitative analysis.

- (b) Magnetism and electricity: Properties of magnets. Magnetic field. Magnetic induction. Magnetic laws and units. Elementary facts of terrestrial magnetism. Electrical attraction and repulsion. Conduction and insulation. Electrostatic induction. Distribution of electricity on conductors. Simple electrostatic laws. Electrostatic units. Friction machines. Condensers. Common forms of voltaic batteries. Heating, chemical, and magnetic effects of electric currents. Electromagnetic units. Galvanometers. Ohm's law and its simple applications. Measurement of resistance and of electromotive force.
- (c) Sound and light: Production and propagation of sound. Intensity. Pitch. Quality. Velocity of sound in uniform media. Reflection of sound. Vibration of strings, and of the air in pipes. Resonance. Beats. The diatonic scale. Production and propagation of light. Photometry. Velocity of light, and modes of determining it. Reflection and refraction. Formation of images by plane and spherical mirrors, and by simple lenses. The prismatic spectrum. Optical instruments and vision.
- (d) Heat: Expansion of solids, liquids, and gases. Thermometry. Liquefaction and solidification. Vaporization and condensation. Properties of vapors. Hygrometry. Latent heat. Specific heat. Calorimetry. Conduction. Convection. The mechanical equivalent of heat.
- (e) Elementary mechanics of solids and fluids: Composition and resolution of statical forces; mechanical powers; ratio of the power to the weight in each; center of gravity; laws of motion; laws of motion of falling bodies; hydrostatics.
- (f) Botany: (1) The morphology, histology, physiology, and life history of saccharomyces, bacteria, protococcus, closterium, spirogyra, penicillium, mucor, saprolegnia, peziza, agaricus, a fucoid, nitella (or chara), marchantia, a moss, a fern, pinus, and the beam plant. (2) The general morphology and classification of angiospermous flowering plants, with especial reference to the following natural orders: Orchideæ, liliaceæ, gramineæ, scrophularinæ, boragineæ, ericaceæ (including epacrideæ), compositæ, rubiaceæ, umbelliferae, onagrariæ, rosaceæ, leguminosæ, malvaceæ, caryophyllæ, cruciferae, and ranunculaceæ; the modification of roots, stems, leaves, etc., to different purposes; parasitism; fertilization of flowers and modes of dispersion of seeds.

IV. The junior scholarships shall be awarded to those candidates who shall have obtained the highest aggregate of marks in any number not exceeding five of the subjects prescribed in Section III of the statute, and to such subjects the values given in the schedule hereunto appended shall be assigned: *Provided*, That for the purpose of awarding junior scholarships, no marks shall be counted in any subject in which the candidate shall have obtained less than one-fifth of the value assigned to that subject.

SCHEDULE.

Maximum marks of subjects for junior scholarship examination.

1. Latin	1,500
2. Greek	1,000
3. English	1,000
4. French	750
5. German	750
6. Mathematics	1,500
7. History and geography	750
8. Science	1,000

V. As soon as possible after the holding of the junior scholarship examination, a list in the order of merit shall be published of those who have obtained the scholarships; and also a list of those who, having failed to obtain a scholarship, have yet obtained three-fourths of the number of marks obtained by the candidate who stands lowest in the list of junior scholars; and those who obtain this proportion of marks shall be deemed to have passed with credit. The names of all the candidates, and the marks they have obtained in the several subjects, shall be published in order of merit.

The examinations for the New Zealand University are partially conducted in New Zealand and partially in England. All the examinations for degrees in law and medicine are held in the colony, and the examinations for degrees in arts and science are held in England. The following is the present list of examiners:

A.—Arts and science.

Latin and Greek.—J. S. Reid, esq., M. A., Caius College, Cambridge.

English.—Appointment not yet decided.

French.—M. Jules Bue, Talorian teacher, University of Oxford.

German.—Prof. Althaus, PH. D., University College, London.

History and Political Economy.—F. York Powell, esq., Christchurch, Oxford.

Jurisprudence and constitutional history.—Prof. W. A. Hunter, M. A., LL. D., M. P., London.

Mathematics and mathematical physics.—E. J. Routh, esq., D. SC., F. R. S., Cambridge.

Physical science.—Principal Garnett, Newcastle.

Chemistry.—Prof. T. E. Thorpe, PH. D., B. SC., F. R. S., Leeds.

Biology and zoölogy.—Prof. G. B. Howes, F. L. S., F. Z. S., Normal College of Science, South Kensington.

Botany.—Prof. I. Bayley Balfour, Edinburgh.

Geology.—Prof. A. H. Green, M. A., F. R. S., Oxford.

Anatomy.—Appointment not yet decided.

Physiology.—Appointment not yet decided.

Mental science.—Prof. Andrew Seth, M. A., St. Andrews.

B.—Law.

Jurisprudence, constitutional history, and principles of legislation.—Prof. W. A. Hunter, M. A., LL. D., M. P., London.

Roman law, international law, and conflict of laws.—Appointment not yet decided.

Contracts and torts.—J. MacGregor, esq., M. A., Dunedin.

Real and personal property.—C. H. Tripp, esq., M. A., Timaru.

Evidence.—J. A. Tole, Auckland.

Criminal law.—J. C. Martin, esq., Christchurch.

Equity.—F. Fitchett, esq., M. A., LL. D., Dunedin.

Statute law.—J. W. Salmond, esq., M. A., Temuka.

Practice and procedure.—C. J. Foster, esq., LL. D., Christchurch.

C.—*Medicine*.

Physics and inorganic chemistry.—Prof. D. F. Brown, M. A., Auckland.

Biology.—Prof. A. P. W. Thomas, M. A., F. L. S., Auckland.

Organic chemistry and practical chemistry.—Prof. J. G. Black, M. A., B. SC., Dunedin, and J. R. Don., esq., M. A., B. SC., Dunedin.

Anatomy.—Prof. J. H. Scott, M. D., M. R. C. S., England, F. R. S. E., Dunedin, and L. Barnett, esq., M. D., C. M., L. R. C., P. S., Dunedin.

Physiology.—Prof. J. H. Scott, M. D., M. R. C. S., England, F. R. S. E., Dunedin, and D. Colquhoun, esq., M. D., L. R. C. P., London, M. R. C. S., England, Dunedin.

Pathology.—W. S. Roberts, esq., M. R. C. S., England, Dunedin, and F. H. Jeffcoat, esq., M. B., C. M., Dunedin.

Materia medica.—I. de Zouche, esq., M. D., Dunedin, and E. W. Alexander, esq., M. R. C. P. S., Dunedin.

Surgery.—W. Brown, esq., M. B., C. M., Dunedin, and W. E. Collins, esq., M. B., M. R. C. S., Wellington.

Medicine.—D. Colquhoun, esq., M. D., L. R. C. P., London, M. R. C. S., England, Dunedin, and F. Fell, esq., M. R. C. S., L. R. C. P., London, Wellington.

Midwifery and diseases of women.—F. H. Jeffcoat, esq., M. B., C. M., Dunedin, and W. Fell, esq., M. R. C. S., L. R. C. P., London, Wellington.

Medical jurisprudence and public health.—F. Ogston, esq., M. D., C. M., Dunedin, and F. Truby King, esq., M. B., B. SC., Dunedin.

D.—*Music*.

Physics.—Prof. F. D. Brown, M. A., Auckland.

Harmony.—J. Fred. Bridges, esq., Mus. Doc., London.

History of music.—G. F. Tendall, esq., Mus. BAC., Christchurch.

A.—*Matriculation and medical preliminary*.

Latin.—Prof. Pond, B. A., Auckland.

Greek.—Prof. Pond, B. A., Auckland.

English.—Mrs. Evans, M. A., Nelson.

French.—Rev. C. Turrell, M. A., Christchurch.

German.—W. M. Clarke, esq., M. A., Christchurch.

Arithmetic.—Prof. Shand, M. A., LL. D., Dunedin.

Algebra.—Prof. Cook, M. A., Christchurch.

Euclid.—Prof. Aldis, M. A., Auckland.

History.—Prof. J. M. Brown, M. A., Christchurch.

Geography.—Prof. Gilray, M. A., Dunedin.

Physics.—Prof. Shand, M. A., LL. D., Dunedin.

Chemistry.—Prof. F. D. Brown, M. A., Auckland.

Mechanics.—Prof. Cook, M. A., Christchurch.

Biology.—Prof. Parker, B. SC., F. R. S., Dunedin.

B.—*Junior scholarships*.

Latin.—Prof. Pond, B. A., Auckland.

Greek.—Prof. Pond, B. A., Auckland.

English.—Mrs. Evans, M. A.?, Nelson.

French.—Rev. C. Turrell, M. A., Christchurch.

German.—W. M. Clarke, esq., M. A., Christchurch.

Physics.—Prof. Shand, M. A., LL. D., Dunedin.

Chemistry.—Prof. F. D. Brown, M. A., Auckland.

Mechanics.—Prof. Cook, M. A., Christchurch.

Mathematics.—Prof. Cook, M. A., Christchurch.

Geography and history.—Prof. Gilray, M. A., Dunedin.

Botany.—Prof. Parker, B. Sc., F. R. S., Dunedin.

There are on the university roll the following who have become graduates by examination:

Bachelors of arts	187
Bachelors of science	11
Bachelors of laws	20
Bachelors of medicine and surgery	14
Masters of arts	114
Doctors of laws	2
Doctors of medicine	4

The following graduates have been admitted *ad eundem gradum*:

Bachelors of arts	29
Bachelors of science	2
Masters of arts	65
Bachelors of medicine	3
Doctors of medicine	16
Bachelors of laws	2
Doctors of laws	3
Bachelor of music	1

The present fellows of the New Zealand University are Rev. J. C. Andrew, M. A. (vice-chancellor); Hon. C. C. Bowen, M. L. C.; F. D. Brown, M. A., B. Sc., Oxon; J. M. Brown, M. A.; C. H. H. Coop, M. A., Rt. Rev. W. S. Cowie, D. D.; F. Fitchett, LL. D., M. A.; J. Giles; Hon. M. S. Grace, M. L. C., M. D.; Rev. W. J. Habens, B. A.; James Hay, M. A., LL. B.; Sir James Hector, R. C., M. S., M. D. (chancellor); Duncan Macgregor, M. A., M. B.; W. D. ———, M. A., LL. B.; Sir George M. O'Rorke, Knt., B. A.; Rev. J. Paterson; His honor, Sir J. Prendergast, Knt. Chief Justice, B. A.; Most Rev. F. Redwood, D. D.; Hon. Wm. Rohlerton, B. A.; J. S. Sale, M. A.; Rev. W. Salmond, D. D.; J. Halliday Scott, M. D.; John Shand, LL. D., M. A.; Hon. Sir Robert Lunt, R. C. M. S.

These fellows constitute the governing body of the university.

CHAPTER III.

EDUCATION IN FRANCE.¹

PART I.—*Brief conspectus of the state system of education and operations in 1890-91,*

PART II.—*The progress of primary schools since Guizot's law, 1833. Translation from La Population Française par E. Levasseur.*

PART III.—*Higher primary and classical schools of France.*

MATERIAL CONSULTED.—*Statistique de l'enseignement primaire, 1886-87.—L'enseignement secondaire, 1865, 1887.—L'enseignement supérieur, 1878-88.—Recueil des monographies pédagogiques, Tomes I, II.—Résumé des États de situation de l'enseignement, 1889-90, 1890-91.—Rapports sur le budget général de l'exercice, 1892-93.—Service de l'instruction publique, par Charles Dupuy.—L'enseignement primaire public à Paris, par E. Duplan, Tome II.—Revue Internationale de l'enseignement, August 15, 1888.—Files of the Bulletin administratif.—Plans d'études et programmes de l'enseignement secondaire classique et moderne.*

PART I.

BRIEF CONSPECTUS OF THE EDUCATIONAL SYSTEM AND OPERATIONS IN 1890 AND 1891.

[France: Republic; area, 204,092 square miles; population (census, 1891), 38,218,903.]

The public system of education in France comprises all grades of scholastic institutions, primary, secondary, and superior, which derive their support from State and local appropriations. Authority over these is vested in a cabinet officer, the Minister of Public Instruction and Fine Arts,² who exercises his control through a large body of officials appointed by himself or by the President of the Republic in advice with the minister. These officials belong either to the central ministry or to the local subdivisions, *i. e.*, *académies* (17 in number). Each of the three grades of instruction constitutes a distinct department of the system under the charge of a director³ who ranks next in authority to the minister. While the operations of each department

¹ By A. Tolman Smith, specialist in English, French, and Belgian school systems.

² M. Léon Bourgeois held this portfolio from March 17, 1890, to December 6, 1892. At the latter date M. Charles Dupuy was appointed to the position, and at the same time the Ministry of Worship, formerly combined with that of justice, was transferred to his province.

³ M. Louis Liard is director of superior instruction; M. Babier, of secondary; M. F. Buisson, of primary.

are regulated by laws and decrees special to itself, nevertheless each *académie* forms an administrative unit, the academic chief, *i. e.* rector, being the virtual head of all the public institutions of his *académie*. He is the sole intermediary between the minister and the superior institutions (*facultés*), but for the service of secondary and primary instruction there are also general inspectors who report immediately to the minister.

The minister is assisted by the superior council of public instruction, a representative body of 60 members, three-fourths of whom are elected by their peers from the various orders of public instruction, the remainder being appointed by the President. The council is not only an advisory, but also a judicial body, being the final court of appeal in certain cases of contention; as, for example, cases of the removal of teachers by local authorities.

Professors of superior and secondary public institutions, and teachers of public primary schools constitute a State teaching force whose requirements are determined by law or ministerial decree; salaries are regulated and paid by the State.

The public technical schools of France (*École polytechnique, École supérieure des mines*, etc.) are not comprised in the system, the minister of public instruction sharing the control over these with other ministers. Private schools are also outside of the system, although the conditions under which they may be established are determined by the minister of public instruction, and they are measurably subject to State supervision.

In respect to the control and conduct of primary instruction, two orders of the political divisions of France, *i. e.*, departments (90 in number) and communes (30,000),¹ are treated as divisions and subdivisions of the *académies*.

The chiefs of departments (*préfets*) have a measure of control over primary schools; these must be established by the communes. Neither rectors nor *préfets* have unlimited control in their respective provinces, but must act upon the advice of local councils (academic and departmental), which, like the superior council, are elective bodies, composed of members of the teaching profession, inspectors, etc. In each *académie* there is an inspector (*inspecteur d'académie*), who directs the general work of the primary schools. A constant inspection of individual schools is maintained by the primary inspectors, of whom there are 450 or one to about 150 schools, distributed among the departments as the number of schools may demand. These inspectors, both academic and departmental, are appointed by the minister. No person is eligible to the inspectorate who has not successfully passed the examination for

¹ The departments are the chief division for local administration. They are divided into *arrondissements*, each of which contains generally a number of communes. It happens, however, that large towns often fill up one or even more *arrondissements* in which case the *arrondissement* becomes a part of the commune. Thus Paris, which is one commune, comprises 20 *arrondissements*.

the inspector's diploma (*certificat d'aptitude à l'inspection des écoles primaires*).

It would seem from this survey that locally constituted authorities have little control in educational matters. This is true with respect to the higher orders of education, but not so in respect to primary schools. Communal authorities have here a decisive voice, since they furnish buildings and equipments and a proportion of the fund for current expenditure. The views and wishes of taxpayers are made known through the communal councils, and the power of the purse causes them to be respected. In Paris, for example, where the school expenses are entirely provided from local funds, the communal council¹ is the controlling power.

The following statistics from the latest official report show the operations of the system whose general features have been outlined.

Scholastic institutions and statistics for 1890-91.—To the department of primary instruction belong infant schools (*Écoles maternelles*, ages 2 to 6 years), enrolling in 1890-91 a total of 709,579 children (public, 465,333; private, 244,246); primary schools (elementary ages, 6 to 13; higher ages, 12 to 14 or 16) enrollment, 5,593,833 (public, 4,384,905; private, 1,208,978). Of the total number 41,018 were in higher primaries. Boys and girls were about equally represented, viz, 2,823,428 and 2,770,455, respectively. The teaching force numbered 152,436 persons (women, 86,965, including teachers of infant schools; men, 65,471), distributed as follows: Infant schools 8,686 (public, 5,133; private, 3,553); primary schools, 143,750 (public 101,272; private, 42,478).

[Public primary schools numbering 67,318 comprised 100,064 classes; private primaries, 14,672 in number, 38,166 classes. Of the public schools 72 per cent, and of the private 32 per cent, had but one class. A completely graded primary school comprises three divisions: Elementary, ages 7 to 9; intermediate (*moyen*), 9 to 11; superior, 11 to 13. Each division has two classes. Promotions are made annually. The certificate of primary studies which exempts from farther compulsion as regards school attendance is required for promotion to the superior division and also admits candidates to the higher primaries. Although the test is not obligatory the number of candidates annually increases. The number successfully passing this examination rose from 165,211 in 1889 to 173,368 in 1890 and to 184,506 in 1891.

The following statistics reported January 1, 1891, in comparison with the previous year are interesting: Number of school libraries, 38,240; number of volumes, 5,111,204; increase, 771 and 213,991 respectively. Teachers' reference libraries (*bibliothèques pédagogiques*), 2,634, with 963,538 volumes; increase, 25,251. Number of school gardens, 51,989; gymnasiums, 6,318; workshops, 742; increase, 109, 369, and 3, respectively. School savings banks (*caisses d'épargne scolaires*), 20,689; number of depositors, 453,319; amount deposited, 12,830,355 francs (\$2,566,071); these figures show a slight decline since January 1, 1890. The funds for aiding poor children, purchase of prizes, etc. (*caisses des écoles*), numbered 16,212, an increase of 37 over 1889. The total receipts for 1890 amounted to \$1,062,149 and the disbursements to \$828,008. Teachers' mutual benefit associations (*sociétés de secours mutuels*) to the number of 41,931 were in operation with a capital of \$1,065,142.]

¹ The commune of Paris is governed by a town council of 80 members, divided into committees for various public services.

The department of secondary instruction (*enseignement secondaire*) includes the classical schools, which are of two orders: *lycées* or state schools whose courses lead to the bachelor's degree, and *collèges communaux*, a class of local colleges whose curricula are modeled, so far as practicable, upon those of the *lycées*.

Private classical schools (called *lycées* or *seminaires*) are maintained with the consent of the minister. In 1891 the enrollment in the public classical schools for boys was 83,764 students, and in the private 90,063, or a total of 173,827. There were also 11,645 students in public *lycées* and *collèges* for girls.

The department of superior instruction comprises the state *facultés*, *i. e.*, groups of professors (at present 59 in number¹) who maintain courses of instruction and lectures in letters, sciences, law, medicine, pharmacy, and Protestant theology, and are also the only authorities empowered to examine for and confer degrees; that is, they perform the same functions as the universities of other countries. They generally have their seat in the principal town of their respective *académies* the academic rector being their official chief and the intermediary between them and the minister. Private *facultés* also maintain courses of instruction but can not confer degrees.

The number of students on the registers of state *facultés* the 15th of January, 1891, was 20,735, which with 931 in private *facultés* gave a total of 21,716 students in university courses.

To the foregoing statistics of attendance should be added 7,491 in the primary normals, about 75 in the superior normal schools for women, and 130 in the École Normale Supérieure, making a sum total of 6,518,346 pupils and students, private schools for girls not included. Of this total 70 per cent were in public institutions. For purposes of comparison with other countries it is best to eliminate the 709,576 children in infant schools. This done, there remain 5,808,770 youth under formal instruction. This number is equivalent to 15.19 per cent of the population.² The primary school enrollment alone, infant schools not included, was equivalent to 14.63 per cent of the population.

¹There are also three superior schools of pharmacy and three of medicine and pharmacy of equal rank with the *facultés*, and fourteen schools of medicine and pharmacy, and three of science and letters, classed as preparatory. These are borne on the same budget as the *facultés*. To the department of superior instruction belong also the great special schools under the exclusive control of the minister of public instruction, *i. e.*, Collège de France, École Normale Supérieure, Muséum Histoire Naturelle, École Française de Rome, École Française d'Athènes, École Nationale des Chartes, École Spéciale des Langues Orientales Vivantes, École Nationale et Spéciale des Beaux Arts à Paris, Conservatoire Nationale de Musique et de Déclamation. The École Libre des Sciences Politiques, at Paris, is a private institution of high rank.

²Census of 1886, legal population 38,218,903. The school attendance of Algiers, 82,457, is included, but not the population (3,910,399). For obvious reasons the use of the latter would produce a greater error in the calculation than that of the former alone.

Relation of the state to the teaching profession.—The professors of the State *facultés* and of the public secondary schools (*lycées* and local colleges) constitute a state professional corps. The former are appointed by the President of the Republic upon the recommendation of the superior council and the minister, the latter by the minister. The service is guarded by examinations and by the requirement of a university degree which for professors of secondary schools must be at least the bachelor's degree, and for the *facultés* the degree of doctor. The conditions of the service, duties, penalties, etc., are carefully regulated by ministerial decree. Salaries range from \$900 to \$2,200 per annum in the *facultés* and from \$420 to \$1,500 in the *lycées*. The École Normale Supérieure, maintained by the state, is the *alma mater* of the most distinguished professors. The teaching service of *lycées* for girls is under special regulations, and a state normal school (*École Normale Supérieure, Sèvres*) is maintained in the interest thereof.

The teachers of primary schools must obtain a state diploma (*brevet élémentaire, supérieur*) awarded upon examination. This requirement had been met in 1890 by 98.6 per cent of the teachers in public primaries and by 82 per cent of those in private. Only lay persons can be employed in the public schools, a requirement now enforced in all public schools for boys. Salaries, which are paid by the state, are graded in five classes, ranging, in the elementary primaries, for men from \$200 to \$400, and for women from \$200 to \$320 per annum, in the higher primaries from \$360 to \$560, and in the primary normals, for men from \$700 to \$1,000, and for women from \$600 to \$1,000. Communes must provide residences and may supplement the salaries. Through the academic inspectors the state maintains a supervision over the teachers engaged in the schools, but their appointment, tenure, and discipline are in the power of the prefects, subject, however, to the advice of the departmental councils and the approval of the inspectors. Every department is legally bound to maintain two primary normal schools, one for men, another for women, or a consolidated normal school. This obligation has been fully met as regards schools for men, and in 86 out of 90 departments as regards schools for women. The state also maintains two superior normal schools to prepare professors for the departmental or primary normals.

Course of study in primary schools.—It may be added that the course of study which primary teachers must be prepared to conduct is extensive, including, besides the three elements, moral and civic instruction, the metric system, history and geography, object lessons, first notions of science, elements of drawing, singing, manual work (needlework for girls), gymnastic exercises, and, for boys, military drill. In the higher primaries the course is much like that of our nonclassical high schools, with large development on the scientific and technical sides.

Finances.—The funds for the support of this comprehensive system of public instruction are derived from state and departmental appro-

priations and from a communal tax for primary schools. Tuition fees are required in *facultés*¹ and secondary schools, but the amount so received is turned over to the public treasury, the state appropriating each year a sufficient sum for current expenditures. In all primary schools tuition is free.

The proposed state appropriation for public education (1892) is 172,924,627 francs (\$34,584,925), of which 73 per cent is for primary education, 11 per cent for secondary, 8.8 for superior, 2.2 for administration, and 5 per cent miscellaneous.² The total expenditure for public primary schools (infant included) in 1890 was 162,681,805 francs (\$32,536,361). Of this, 64.7 per cent was contributed by the state and the balance by the communes.³ The marked increase in the relative proportion derived from the state (it was 50.6 per cent in 1889, as against 64.7 in 1890) is due to the fact that the state has assumed the responsibility of paying the salaries of teachers. The expenditure was equivalent to \$6.68 per capita of enrollment for the year specified (*i. e.*, 1890).

Although every part of the educational system of France has been developed by the Republic, the primary schools have been its especial care. The progress of these schools is therefore properly regarded as an index of the strength and spirit of the Government. The universal interest which the history of this department excites gives importance to the following exposition of its development from a recent work by M. E. Levasseur:

PART II.

THE PROGRESS OF PRIMARY SCHOOLS SINCE GUIZOT'S LAW, 1833.

The government of Louis Philippe, outcome of a revolution, ought from the outset to have shown itself favorable to popular education. It was not, however, until after the failure of several projects that M. Guizot secured the passage of a law, June 28, 1833, which was, in a certain sense, the fundamental charter of primary instruction in France. This law imposed upon every commune the obligation to maintain an elementary primary school and provided for the support of the school by an extra tax of 3 *centimes* in addition to the three direct taxes. It fixed a minimum of 300 francs (\$60) for the salary of the teacher, who had, moreover, the right to school fees paid by the parents who were not indigent. The law provided for the free instruction of the indigent

¹ By a decree of July 25, 1885, the *facultés* were empowered to receive, hold, and administer property, a right conferred upon them at the time of their constitution (1801), but suspended in 1875. The work of organizing the *facultés* of each *académie* into organic bodies is in progress. The bill for converting them into distinct universities is before the chambers.

² Rapport sur le budget général de l'exercice, 1892, par M. Charles Dupuy, pp. 122-125.

³ Résumé des états de situation de l'enseignement primaire, 1890-91, p. 123, and Table 23.

classes, the expenses of the same being equitably distributed among a series of authorities extending from the family to the state. Whenever communal resources were inadequate for this purpose, they were to be supplemented by subventions from the departments not exceeding a levy of two additional *centimes*, and if need be, by subventions from the public treasury. The law also created higher primary instruction (*enseignement primaire supérieur*) and primary normal schools. Under the influence of this law 2,275 schools were opened in a year, 450,000 new pupils were there enrolled, and 15 normal schools were founded.

The law of 1833 provided only for schools for boys. An ordinance of 1836 extended the same advantages to girls, without, however, imposing upon the communes, as the law had done, the necessary expenses.

In 1848 the number of pupils enrolled had reached a total of 3,500,000. This was an increase of 31 per cent over the enrollment in 1837, date of the first general statistics of primary schools. It was equivalent very nearly to 10 pupils for every 100 inhabitants. The revolution of February, 1848, gave rise to new projects. The Republicans demanded gratuitous and obligatory instruction. The legislative assembly, however, prompted by the conservative and religious party, passed the law of March 15, 1850, which proclaimed "liberty of instruction," made the maintenance of schools for girls obligatory, suppressed several useful creations of the law of 1833, and opened wider the gates to clerical instruction (*enseignement congréganiste*).

The second Empire, which at first showed some suspicion of the teachers, finally improved their salaries somewhat, and afterward, under the ministry of M. Duruy, passed the law of April 10, 1867, which provided for an extension of free instruction and imposed upon every commune having at least 500 inhabitants the obligation to maintain a separate school for girls.

In 1872, after the tempest which overwhelmed the Empire, the primary schools of France, reduced in number by the loss of Alsace-Lorraine, enrolled 4,722,000 pupils. The increase since 1837 had been 75 per cent. The third republic has not displayed less zeal than the first in behalf of primary instruction, but, more concerned with practical applications than the first republic, has manifested her zeal by acts. Recognizing that public instruction, useful under all governments, is indispensable under a democracy, and that it is not only a benefit to the people who receive it, but a powerful instrument of political discipline for the government which gives it, the Republic has desired that the state should become the master of schools in order to develop in this double interest a system of education more widely distributed and conceived in the spirit of republicanism.

Diverse projects have been successively discussed in the parliaments since 1871. They have resulted in a series of laws, nearly all passed during the presidency of M. Grévy, and the most important under the ministry of M. Ferry.

By means of subventions or advances to the communes, which in ten years (1878-1888) reached a total of 527,000,000 francs (\$105,400,000), these laws have caused the construction or the repair of more than 20,000 schoolhouses (laws of June 1, 1878, August 2, 1881, and of June 20, 1885). They have provided in every department for normal schools for women (law of August 9, 1874), regulated the schools of manual apprenticeship (law of December 11, 1880, and decree of March 17, 1888), decreed the absolute gratuity of primary instruction (law of June 16, 1881), rendered primary instruction obligatory (law of March 28, 1882), regulated (law of October 30, 1886) in a general manner the organization of primary instruction, and decided that the public schools in the future should be exclusively under lay teachers;¹ determined (law of July 15, 1889) the salaries of teachers should be paid henceforth by the state, with additions in certain cases specified of communal subsidies (for indemnity for residence); increased tenfold the subventions of the public treasury, and thus transferred from the families and the communes to the state the greater part of the responsibilities and expenses, which in 1887 reached a total of 173,000,000 francs (\$34,000,000) expenditure by the state, the departments, and the communes, not including the cost of the construction and repair of schoolhouses.

The republic has ameliorated the condition of teachers, a policy in accord with the interests of a democracy. While recognizing that it is in general more advantageous for the teachers that they should depend upon the state rather than upon the communes, and that the greater part of the changes accomplished during the past fifteen years have been to the advantage of instruction, I have not seen without regret the abolition of school fees, which did not prevent the free admission of indigent pupils and which brought into the school funds from 16,000,000 to 18,000,000 francs (\$3,200,000 to \$3,600,000), and the systematic elimination of the religious orders from public instruction, whose coöperation regulated and superintended by the administrative authority was useful, and whose relegation to the private schools has divided interests and excited religious passions. The republic shows itself also to be inspired with the sentiment of democracy in constructing schoolhouses everywhere, as, after the year 1000, the middle age, inspired by religious faith, created new churches or rebuilt after a new type the ancient edifices.

While approving the policy of constructing suitable schoolhouses (and despite the critics it appears certain that the great majority of the buildings have not exceeded the requirements),² it seems to us that it

¹ Within five years of the passage of the law in schools for boys.

² According to the general report upon school constructions (*relevé général des constructions d'écoles*, 1^{er} Juin 1878, 20^{ème} Juin 1885) published by the minister of public instruction, and containing the details of the expenses incurred for each structure, the mean price of the new buildings (containing each one or two schools) has been about 30,000 francs (\$6,000), not including the department of the Seine. The

would have been more economical to have proceeded more slowly and with sole regard to pedagogic interests. But I am departing from my subject in treating of these matters.

What seems to be certain and what it is important to consider here, is the fact that a vigorous impulse has been given to primary instruction by these measures taken together, *i. e.*, the creation of schools, the division of large classes, the increase in the number of teachers, the attention given to their preparation, the improvement of material appliances, by the emulation even which has been excited between the laity and religious orders, in fine by the increase of the school attendance of both sexes. From 1872 to 1889 the number of schools increased by 11,000 and that of their teachers by more than 22,000; the number of church private schools increased by more than 3,000, while the private lay schools diminished, being ruined and paralyzed between the two great powers, church and state. The number of pupils entered upon the registers of schools of all classes during the same period rose from 4,722,000 to 5,623,000 (Algiers not included).

Since 1837, in fifty years that is, the number of pupils has more than doubled, although the population of France, including the European population of Algiers, has gained during the same time only 13 per cent. (*La population française, par M. E. Levasseur, Tome 2, pp. 481-485.*)

Although the primary school attendance of France increased by 19 per cent from 1872 to 1889, the last five years of this period shows a decrease amounting to 10,009 pupils or a little less than two-tenths per cent. Small as this diminution is, the fact has excited attention and given rise to many explanations. M. Levasseur has made an exhaustive analysis of the statistics bearing upon this point with the following results:

The decrease noted is attributable wholly to the public primaries, which lost from 1884-85 to 1889-90 a total of 127,487 pupils as against a gain of 117,478 in private primaries. The absolute loss (10,009) is explained by the decrease of the school population (of age 6 to 13). From estimates based upon the census of 1886 and the ratio of births 1874 to 1880, M. Levasseur concludes that the school population fell from 4,729,000 in 1885 to 4,663,000 in 1890, a decline of 66,000, or a little more than 1 per cent. This it is seen is ample to cover the decline of less than two-tenths per cent in school attendance. The analysis of the statistics by departments confirms this view. For twelve departments which have lost each more than 2,500 pupils, M. Levasseur's estimates give a decline of 42,325 in school population. The census of 1891 fur-

maximum has been 45,529 francs (\$9,105) for the Rhone, and the minimum 7,982 francs (\$1,592) for the Lozère. These buildings are not all of the same dimensions; the place for a pupil, which furnishes the most precise term of comparison, has cost on an average 306 francs (\$61), the Seine not included, with a maximum of 480 francs (\$96) Eure-et-Loir, and a minimum of 135 francs (\$27) Vendée.

nishes proof of the correctness of this estimate, as these same departments are in the list of thirty-five whose total population was less in 1891 than in 1886. On the other hand, the twelve departments which showed an increase of school attendance from 1885 to 1890 are with a single exception in the category of thirty-two which had more inhabitants in 1891 than in 1886. As to the gain in attendance made by the private primaries at the expense of the public, M. Levasseur observes that this is a natural consequence of the enforcement of the law excluding church teachers from the public schools. The term allowed for giving full effect to this law in schools for boys expired November 1, 1891. If the change noted had not taken place it would have proved that no public school in which church teachers were formerly employed was reorganized as a private school after the removal of those teachers. This is neither true nor under the circumstances conceivable.¹

PART III.

HIGHER PRIMARY AND CLASSICAL SCHOOLS OF FRANCE.

The department of secondary instruction in France (*enseignement secondaire*) includes only classical schools, *i. e.*, *lycées* and *collèges communaux*, but secondary instruction as we understand the expression is also the province of the higher primary schools (*écoles primaires supérieures*), which are classified in the elementary department (*enseignement primaire*).

General characteristics of higher primary schools.—These higher primaries may be described as nonclassical schools, which carry the instruction of pupils for two, three, or four years beyond the elementary primaries. The establishment for this higher instruction takes the name of complementary course (*cours complémentaire*), if it is annexed to an elementary primary school and placed under the same director; if installed in a separate building and under separate direction, it is recognized as a high school (*école primaire supérieure*). The complementary courses are limited to two years. If the school has a three years' course, it is called full or complete (*école de plein exercice*). A fourth year may be added.

Two classes of higher primary schools are recognized, *viz*, professional (technical) and nonprofessional. The former, by a decree of July 28, 1888, have been classed with the schools of manual apprenticeship under the joint control of the minister of public instruction and the minister of commerce and industry; they have as yet little more than legal existence and do not enter into the present consideration.

The term nonprofessional, applied to the ordinary higher primaries,

¹ For the full discussion of this matter by M. E. Levasseur see *Revue Pédagogique*, June, 1892, 494-590.

is not intended to imply the neglect of manual or even of technical training, but simply that this training is not directed to the requirements of special trades or industries.

These higher primary schools are established at the instance of the departmental councils with approval of the minister of public instruction. The communes furnish the buildings and the funds for current expenses, assisted by a subsidy from the State. The directors, who are appointed by the minister, must have a special diploma (*certificat d'aptitude au professorat des écoles normales et des écoles primaires supérieures*) or its equivalent. The professors are also appointed by the minister; assistant professors, by the prefect, upon the nomination of the academic inspector. The only requirement for admission to the schools is the certificate of primary studies. The State encourages attendance by bursaries, which are awarded upon the results of competitive examinations. The course of instruction is determined by general programmes elaborated in the superior council of public instruction and approved by the minister.

Numerical progress.—Although authorized by Guizot's law of 1833, public higher primary schools made little progress until 1878, when a credit of \$22,000 was allowed as a fund in aid of the communes for their establishment. Since that date appropriations for them have annually increased and there has been a corresponding increase in the number of the schools themselves, which rose from about 40 in 1878 to 226 in 1887, at which latter date there were also 431 complementary courses, the enrollment in both schools and courses being 30,725.¹ There were also at the same date 47 private higher primaries, which raises the total enrollment to 38,441.² In 1890-91 the enrollment in public higher primaries reached a total of 41,018,³ which is nine-tenths of one per cent of the total enrollment in public primaries. With this brief survey of the general status of the higher primary schools in mind we may form a better idea of the scholastic provision which they offer by considering more particularly the schools of this class in Paris.

Scholastic work.—The programme maintained in the schools of the capital may be taken as an index of their highest scholastic development. As given in the following table it is uniform for all the higher primaries for boys, but undergoes some modifications in its application to the schools for girls:

¹For a detailed account of the development of these schools see article by Felix Martel, "Écoles primaires supérieures et Écoles d'apprentissage" (Recueil des monographies pédagogiques, tome II).

²Statistique de l'enseignement primaire, 1886-'87, pp. XLI, LXXXI.

³Résumé des états de situation de l'enseignement primaire, 1890-'91, p. xvi.

Programmes of higher primary schools.

Subjects of instruction.	Distribution of hours per week.						
	First year.	Section preparatory to the schools of arts and industries.	Second year.	Third year.		Fourth year.	
				Commer- cial sec- tion.	Indus- trial sec- tion.	Obliga- tory sub- jects.	Special subjects, optional.
Moral instruction	5	4	4	5	5	1	4
French	5	10	4	4	2	2	8
Modern foreign languages	5	1	5	4	5	6	2
Mathematics	2	1	1	1	1	2	2
Natural history	1	2	1	2	2	{ 2 distinct courses, 4 hours and 3 hours.	
Physics	1	1	1	1	2		
Chemistry		1	1	1	2	2	1
Mechanics	2	2	2	2	2	2	1
History	2	1	1	2	1	1	1
Geography	1	1	2	1	1	1	1
Civics	1	2	1	3	1	1	1
Bookkeeping			1	1	1	1	1
Industrial economy	2	1	1	1	1	1	2
Law	2	2	2	2	2	2	2
Writing	2	2	2	2	2	2	2
Geometric drawing	2	2	2	2	2	2	2
Freehand drawing	1½	1½	1½	{ 1½ (both sections united.) }			
Singing	5	3	3	3	3		
Gymnastics and military exer- cises	2	10	2	2	2		
Manual work							

The following particulars relative to the schools of Paris, from a special report on the subject, will help to give some idea of the conditions under which the above programme is developed.¹

Number of schools and pupils.—In 1891 the city maintained for boys four day higher primary schools (Turgot, Colbert, Lavoisier, Arago), one high school with a boarding department (Jean-Baptiste Say), and for girls one day high school (Sophie Germain). A second high school for girls was authorized in 1884 and the buildings for the same commenced in 1890. The five schools in operation afforded accommodation for about 3,400 boys and 340 girls. The new school will make provision for about 450 additional girls. The actual enrollment in these schools in 1890 was 2,712 boys and 340 girls. All the schools have the full course, including the additional fourth year; 17.62 per cent of the boys and 29 per cent of the girls were in the last two years of the course. There were at the same time 2,178 pupils (981 boys, 1,197 girls) in complementary courses. Each year of the course corresponds to a class; each class is comprised in one or more divisions, as the number of pupils may require, the exercises being absolutely uniform for the divisions of the same year.

Teaching staff.—The staff of a higher primary school at Paris comprises always a director, professors, and tutors (*maîtres répétiteurs*).

¹ L'enseignement primaire public à Paris, tome II. L'enseignement primaire supérieur, M. E. Duplan, sous-directeur de l'enseignement primaire du Département de la Seine.

The professors are assigned to special subjects and are present only during the hours of their respective classes. In 1890 the number attached to the schools for boys was 165, of whom 14 gave lessons in two or more schools. The tutors are comprised in two classes, one employed wholly in the oversight of the pupils out of class hours and the other combining instruction with this oversight. The total of this class of teachers in 1890 was 58. The staff of the high school for girls consists of a directress, 16 professors, a teacher of sewing, and 11 tutoresses (*maîtresses répétitrices*).

Prior to the passage of the law of July 19, 1887, by which the State assumed the responsibility of paying all the teachers of primary schools at fixed rates, the professors and tutors in the high schools of Paris were paid by the hour. By special provisions, authorized by a decree of August 3, 1890, the city of Paris virtually retains control of the salaries of its teachers. Directors of the higher primaries receive a minimum salary of 7,000 francs (\$1,400); maximum, 9,000 francs (\$1,800), and full professors (*titulaires*), from 3,800 francs (\$760) to 5,000 francs (\$1,000). The decree referred to authorizes the employment of auxiliary professors, who are paid by the hour at the minimum rate of 300 francs (\$60); maximum, 500 francs (\$100) annually, for one hour a week. It should be noted also that the decree provides for the employment in each school of a general superintendent of studies (*surveillant général des études*.)

Buildings and material.—The housing and equipment of these schools are on a liberal scale. They differ necessarily in details, the later schools having the advantage of the experience of the earlier schools. The following features are common to all the schools: Class rooms (*amphithéâtres*) adapted to the various subjects of instruction; study halls (*salles d'études*); rooms for library and for illustrative apparatus (*salles de collections et bibliothèques*); workshops for wood and iron work (*ateliers de travail manuel*); open and covered courts for recreation (*cours de récréation avec abris et préaux couverts*); kitchen and dining rooms (*cuisine et réfectoire*). There are also living rooms for the director and other officials who reside on the premises, and for the attendants, janitors, etc.

In the schools for girls, the workshops are replaced by rooms fitted up with all the appliances for cutting, fitting, sewing, laundry work, cooking, etc. All books and school material are provided gratuitously.

Daily routine.—The daily exercises of the schools are from 8 o'clock to 5:30 each day in the week, excepting Thursday, when the session closes at 12:30, and Sunday, when there is no session. For holidays, there are ten or twelve days at Easter, three at New Year's, all other legal holidays, and a summer vacation lasting from the beginning of

August to October 1; altogether, there are about 220 full days' sessions annually. The daily session is divided as follows:

	Hours.
Class work	5
Study	1
Singing, gymnastics, military exercises.....	1
Recreation and dinner	2½
Total.....	9½

The succession of recitations, study hours, and recreation is carefully arranged to secure sufficient diversity in, and relief from, brain work. The duration of study or of class must not exceed an hour. One may follow the other, but at the end of the second period a quarter of an hour must be spent in exercise. Dinner and play occupy the hour from 12 to 1. Pupils who live near may dine at home, others purchase their dinners for a small sum at the school.

The discipline of the schools is wholly moral, even the punishment which may be inflicted in the elementary primaries, *i. e.*, detention after school and extra task to be done at home, being forbidden in the higher primaries. The most effective restraint upon willfulness is found to be the notes of complaint or warning inscribed upon the weekly report which is sent to the parents. These notes diminish the chance of the culprit for obtaining the annual prizes which are the rewards of good conduct and successful effort, and also deprive him of the right to share in the funds for the aid of children whose parents are too poor to support them through the years of advanced study. It should be said that love for their teachers, interest in their work, and a sense of honor seem to be, for nearly all pupils, sufficient incentives to obedience and diligence.

Finances.—For the support of the higher primary schools whose work has here been briefly outlined, Paris made appropriations in 1890 as follows: 1,458,780 francs (\$291,756) for the five schools for boys, and 169,100 francs (\$33,820) for the schools for girls, or a total of 1,627,880 francs (\$325,576). Of this amount 27 per cent was appropriated for material and 73 per cent for salaries and other emoluments of the teaching corps. The receipts in the school Jean-Baptiste Say, which, as already stated, has a boarding department, were 400,700 francs (\$80,140), which leaves as a net expenditure for the city \$245,436. This, it should be noticed, does not include the expenditure for the complementary courses, nor for the Collège Chaptal. The latter institution is a municipal school for boys, of a different order from the higher primaries. Its programme covers the ground both of the elementary and higher primaries, with a much larger extension of the scientific branches and the addition of Latin. Pupils enter at about 8 years of age and remain for ten or twelve years, as in the *lycées* or classical colleges. The enrollment in this school in 1891 was 1,235. It was maintained at an expense of 888,503 francs (\$177,700). The receipts amounted

to 652,258 francs (\$130,451), leaving an expense to the city of \$47,249. The Collège Chaptal belongs in reality to the secondary department of the French educational system. In this department Paris is represented further by 9 *lycées*, 2 *collèges*, and 3 private schools.

THE CLASSICAL SCHOOLS (*lycées*) WITH SPECIAL REFERENCE TO RECENT MODIFICATIONS.

The recent decrees modifying secondary courses of study in France (viz, decrees of August 8, 1890, and of June 4, 1891) pertain to the classical schools for boys. Of these, the representative or typical schools are the *lycées*. These are institutions founded by the state with the coöperation generally of the cities in which they are located, and controlled from the central authority. They number at present 107, and comprise about one-third of the students (*i. e.*, 173,827) pursuing secondary courses. The communal colleges (numbering 235) are an inferior order of classical schools, established by individual communes with the aid of the state, and offering so far as practicable the same courses of study as the *lycées*. This uniformity extends also to private *lycées* and seminaries, a natural consequence of the policy which makes the *lycée* course the preparation for the bachelor's degree. The *lycée* is often compared to the American preparatory school; the comparison might hold if we should add to the latter two years of college work, and place the bachelor's degree at the close. Even then the *lycée* course would seem to be the fuller as regards Latin, and modern languages. We shall gain a better idea of these institutions by examining their organization and programmes. They comprise boarding and day departments, and both household and scholastic routine are minutely regulated by ministerial decrees. The scheme of study is arranged for three divisions, elementary, grammar, and superior. The first two are subdivided each into three classes, the third into four. Each class is designed for a year's work.

A lad enters at about 8 years of age, having already mastered the elements of reading and writing, and if able to work at high pressure all the time will take his bachelor's degree at eighteen. This is seldom done without duplicating at least a year, or enduring a severe strain, as will be readily inferred from an examination of the programme appended to this article.

This programme is one outcome of the new decrees, which are intended as reform measures; to understand them in this intent it is necessary to know something of the antecedent conditions.

Origin and organization.—The name *lycée* was adopted by Napoleon (1802) for the schools which he had purposed to take the place of the old colleges suppressed by the convention (1793). The plan of studies authorized by the Emperor, *i. e.*, of two parallel courses, the one based upon Latin, the other upon mathematics, marks in France the beginning

of the effort to give equal recognition to all departments of knowledge.¹ From the moment of the adoption of this plan of study, the scope and adjustment of secondary studies became, in the superior council, the absorbing educational problem. One scheme after another was tried and abandoned, and the schools were kept in a perpetual state of change² until 1865, when a scheme, elaborated by M. V. Duruy, then minister of education, was adopted. The organization of the full course under this scheme was as follows:

ELEMENTARY DIVISION (<i>division élémentaire</i>).		Average age.
Preparatory class (<i>classe préparatoire</i>)	years..	8
Eighth (<i>huitième</i>)	do...	9
Seventh (<i>septième</i>)	do...	10
[Certificate of studies (<i>certificat d'études</i>) to be obtained before admission to the sixième.]		
DIVISION OF GRAMMAR.		
Sixth (<i>sixième</i>)	years..	11
Fifth (<i>cinquième</i>)	do...	12
Fourth (<i>quatrième</i>)	do...	13
[Certificate d'études, necessary for the troisième.]		
SUPERIOR DIVISION (<i>division supérieure</i>).		
Third (<i>troisième</i>)	do...	14
Election allowed between the two following:		
COURSE OF LETTERS (<i>classes de lettres</i>).		Average age.
Second	years..	15
Rhetoric	do...	16
[First examination for diploma for bachelor of letters (<i>baccalauréat ès-lettres</i>).]		
Philosophy	years..	17
[Second examination for bachelor of letters.]		
COURSE OF SCIENCES (<i>classes de sciences</i>).		Average age.
Preparatory mathematics	years..	15
Elementary mathematics ³	do...	16
[Examination for diploma of bachelor of sciences (<i>baccalauréat ès-sciences</i> ⁴).]		

The decree authorizing this plan was dated March 2, 1865; in June following, an innovation proposed by M. Duruy was also determined

¹ The central schools which the convention created to replace the suppressed colleges were essentially scientific schools. On a total of 14 professors assigned to each school, one only was allowed for the ancient languages. See decree of February 25, 1794 (7 Ventose, An. III), Art. 2.

² In 1809 the parallel courses were abandoned for a single course, and Greek, which had been dropped, was restored to the programme. In 1821, under Louis XVIII, the course was again changed, the sciences being assigned to a special section not leading to a degree. In 1826 there was a return to a uniform course. In 1840 M. Cousin again attempted to provide for the sciences by special courses of inferior rank to the classical. In 1851, under Louis Napoleon, parallel courses were once more established. For a detailed account of these successive experiments, see *Statistique de l'enseignement secondaire*, 1865, pp. XVI-XXVI.

³ There was also a special class of mathematics intended to prepare candidates for admission to the Polytechnic, the Superior Normal school, and the Central School of Arts and Manufactures.

⁴ There were two forms of this diploma, *baccalauréat ès sciences complet* and *restreint*. The latter, sciences limited, sufficed for candidates entering the medical faculties, since they must also be provided with the degree in letters.

upon. This was the creation of a special course (*enseignement secondaire spécial*), a nonclassical course of six years, intended for students who expected to enter upon industrial or commercial careers.¹ It was coördinated to the courses of the primary schools and thus made a way for the admission of the bourgeois class as distinguished from the nobility, the military, and the professional classes, who had enjoyed heretofore the monopoly of the *lycées*.²

The most radical departure in the regular course accomplished by M. Duruy was the new baccalaureate (*bachelierès-sciences*). This gave to the sciences a sanction heretofore sacred to letters and offered it on easier terms, *i. e.*, a single examination in place of the two required in letters. The measure was in violent opposition to scholastic ideals which were the heritage of ages³ and which had been intensified by

¹ A similar course was a feature of a reform measure submitted by a special commission and embodied in a statute of March 5, 1847. The revolution of 1848 prevented its execution.

² It is in the *lycée* that the *élite* of our youth, magistrates, administrators, officers, diplomats, authors, receive all the general instruction that they will carry into life. In them is accomplished the apprenticeship of mind, and it may be said in advance that whatever gaps and deficiencies exist in secondary instruction will show themselves in the intellectual life of the nation. (Quelques mots sur l'instruction publique en France, par M. M. Bréal, p. 157.)

³ Says M. Bréal: "When, after considering primary instruction, we pass to the study of the *lycées*, we feel ourselves upon ground very solid and unyielding. Here we encounter foundations six or seven centuries old, for it is not the facultés which continue the ancient University of Paris; it is our secondary instruction which has received this heritage and which by manifest ties connects itself with the ancient College of Sorbonne and further back with the cloister school of Notre Dame."

Having briefly summarized the work of the Jesuits and the catastrophe of the Revolution, M. Bréal continues:

"A single establishment survived. The College Louis-le-Grand, more anciently the College of Clermont, lived through the Revolution under the successive names of the Institute of Foundation Scholars (*Institut des Boursiers*), College of Equality (*Collège de l'Égalité*), French Prytanis (*Prytanée Français*). Despite these new appellations, the studies and the professors remained the same. In 1804 it was called *Lycée Impérial*, and by a remarkable example of multiplication became the model and the father of all the *lycées* and *collèges* created or established throughout the extent of the Empire." (Quelques mots sur l'instruction publique en France, pp. 152, 153.)

Of this same institution, Jules Simon says: "This College of Clermont, which took then the name of Louis-le-Grand, with its 500 resident students (*internes*) and its innumerable day scholars (*externes*), resembled very closely the Louis-le Grand of to-day, and this resemblance appears not less marked if we compare the general systems of control (*régléments*). I speak not of the moral direction, but simply of the plan of studies." (*La réforme de l'enseignement secondaire*, par Jules Simon, pp. 197, 198.)

Says M. Berthelot: "As early as the end of the sixteenth century, we read in the programmes of study for 1583, of the College of Guyenne (*schola aquitanica*) a complete organized system comprising ten years, from the tenth (*dixième*) to the second and first (our rhetoric), a system absolutely parallel to our existing secondary instruction save that the programmes were purely literary." (*La Crise de l'enseignement secondaire*, *Revue des Deux Mondes*, March 15, 1891, p. 352.)

their incorporation with the pedagogical system of the Jesuits.¹ In this system the organization of the schools played as important a part in the training of the students as the course of study. The principal features of the organization were revived in the lycées and are retained to the present day. The difficulties in the way of any attempt to modify secondary instruction in France can not be understood without taking these features into account.

Briefly stated they are:

(1) A system of general education complete in each institution and uniform for all, absorbing the time and the energies of the *élite* of the nation for the ten or twelve plastic years of youth.

(2) A domestic régime (*internat*, the lycées, like the Jesuit colleges, being boarding schools) in which the personal surveillance of students, while it is perhaps less constant and subtle than under the Jesuits, is supplemented by a mechanical routine even more repressive.

(3) Separation of household from scholastic régimes, professors non-resident, students in charge of household officials, and tutors (*maîtres répétiteurs*), of whom there is generally one to every thirty students.

(4) Control, complete and absolute, emanating from a central and external authority, *i. e.*, the state replacing the ecclesiastical order.

(5) An official sanction, the baccalauréat, at the end of the course, which is the necessary passport to civil office, to professional studies, and to social prestige.

A system so ordered naturally tends to develop a class or caste in a community, and to its spirit literary studies lend themselves more readily than scientific.

The new baccalaureate (that awarded for science) and the special course, really struck at the roots of the system. M. Duruy, however, laid chief stress on the necessity of bringing new studies into organic union with the old. "Our studies," he said in advocating his plan, "are not combined in such a manner as to promote the salutary equilibrium of all the intellectual faculties. Our scholars are too widely separated. Those in the scientific course have not enough of letters and those in the course of letters not enough of the sciences."²

The effort to crowd all branches of knowledge into the curriculum soon resulted in serious overpressure or superficial attainments; meanwhile the lycées were disturbed by the clash of conflicting interests, and further reforms became imperative. These were discussed within the superior council and urged from the outside by those who realized the importance of science in the industrial competition of the age and the peril to France in the physical degeneracy of her educated youth.

Trend of recent efforts at reform.—In 1872 Jules Simon, at that time minister of public instruction, gave a new direction to reform measures

¹For an exposition of the educational system of the Jesuits see *Histoire critique des doctrines de l'éducation en France*, G. Compayré, tome 1, livre deuxième, Chap. 1.

²Rapport à l'Empereur, etc., statistique de l'enseignement secondaire, 1865, p. 285.

by a circular addressed to the principals (*provisseurs*) of the *lycées*. His instructions were directed both to the spirit and to the methods of work. He urged the necessity of freer life within the schools, insisted upon gymnastics, military exercises, and out-door sports and excursions, and called for radical changes in the methods of instruction as the only means of affording relief from the unnatural strain of brain work. Two exercises in particular he sought to eliminate, the making of Latin verses and translations oral and written from French into Latin (*thèmes*). Time was thus to be gained both in class and in study hours for other subjects, particularly for foreign languages. "Every student," he observes, "must make choice either of English or of German." These and other new subjects were to be pursued without the sacrifice of anything essential in the old, the latter being simply reduced to fair proportions.¹

The influence of this circular is to be seen in every subsequent effort at reform. It was final as regards Latin verse; the *thème* remains, but is greatly restricted. By the liberty which it gave to the principals, this circular also made a break in the uniformity and the rigid organization of the schools in favor of individuality and the spirit of emulation.

The movement in this direction has been accelerated by the influence of the *Ligue nationale de l'éducation publique*, and by the example of private schools, especially the *École Monge*, at Paris, which have entered the lists unhampered by traditional practices.

While new impulses were thus set in motion within the *lycées*, the demand for a reorganization of studies continued, and in 1888 a commission was appointed by the minister to deal with the problem.² Their recommendations formed the basis of the decrees already mentioned (decrees of August 8, 1890³ and June 4, 1891⁴); the former pertaining to the general organization of the regular course of study, the latter to the special course. As the commission was under the presidency of Jules Simon, and composed largely of men in accord with his views, its work naturally follows the lines laid down in his circular as already specified. Indeed in his instruction to the principals accompanying the new decrees and programmes, M. Léon Bourgeois, minister of public instruction at the time of their issue, covers substantially the same ground as his predecessor. He emphasizes the order relative to physical training and exercise, advocates better methods of instruction, insists upon the elimination of useless exercises, leaves much freedom to the principals in respect to the daily routine, and urges the need of a more natural and spontaneous activity among the students.⁵

¹ See circular to MM. les Provisseurs sur l'enseignement secondaire, *Statistique de l'enseignement secondaire*, 1876, pp. 412-428.

² *Revue internationale de l'enseignement*, August 15, 1888, p. 190.

³ *Bulletin administratif*, No. 918 (August 16, 1890), pp. 247-260.

⁴ *Ibid.*, No. 960 (June 13, 1891), p. 570.

⁵ *Ibid.*, No. 922, 1890, supplement.

The new programmes and comparison with the old.—The modifications in the regular course of study under the new scheme may be seen by a comparison of class work required under programmes authorized at successive periods of reform—viz, 1865, 1880, 1885, and 1890, respectively. The time assigned to class work may properly be made the unit of comparison if we keep in mind (1) the nature of class work. This consists chiefly of the examination of exercises (*devoirs*) accomplished in study hours and a survey of the subject-matter of the succeeding exercises. There is little interchange of ideas and knowledge between student and professors, such as takes place in our recitations; this is indeed a feature which the reformers are endeavoring to change, and the new regulations call for more oral repetitions than heretofore. Instruction, as we understand the word, has been and still is in large measure the work of the tutors (*maîtres répétiteurs*) in extra class hours rather than of the professors. (2) That the time assigned to study and exercises out of class is nearly double that given to class work—i. e., $7\frac{1}{4}$ hours against 4 hours a day.

With these facts in mind the following tables pertaining to the classical course of the lycées are suggestive. It should be observed that the elementary division and the class of philosophy are excluded from the view:

Table showing for classical course in lycées percentage of time in class each week from sixième through rhetoric.

Classes.	Latin.			French.			Greek.		
	1880.	1885.	1890.	1880.	1885.	1890.	1880.	1885.	1890.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
Sixth (sixième).....	41.66	50	50.00	12.50	15	15.00			
Fifth (cinquième).....	40.00	45	45.00	12.00	15	15.00		5	5.00
Fourth (quatrième).....	24.00	25	25.00	12.00	10	10.00	24	30	30.00
Third (troisième).....	20.00	25	24.39	12.00	10	9.75	20	25	24.39
Second.....	16.00	20	24.39	16.00	15	14.63	20	25	24.39
Rhetoric.....	16.00	20	19.51	20.00	20	19.51	16	20	19.51

Classes.	Total Latin, French, and Greek.				English or German.				History and geography.			
	1865.	1880.	1885.	1890.	1865.	1880.	1885.	1890.	1865.	1880.	1885.	1890.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Sixth (sixième).....	70.83	54.16	65	65.00	8.33	12.50	10	7.50	8.33	12.50	15	12.50
Fifth (cinquième).....	70.83	52.00	65	65.00	8.33	12.00	10	7.50	8.33	12.00	15	12.50
Fourth (quatrième).....	64.00	60.00	65	65.00	8.00	8.00	10	7.50	8.00	12.00	15	12.50
Third (troisième).....	56.00	52.00	60	58.53	8.00	12.00	10	7.32	8.00	16.00	15	12.19
Second.....	53.85	52.00	60	63.41	7.69	12.00	10	7.32	11.53	16.00	15	12.19
Rhetoric.....	61.53	52.00	60	58.53	7.69	12.00	10	12.19	11.53	16.00	15	12.19

Classes.	Science.				Drawing.				Religion.	Total number of hours.			
	1865.	1880.	1885.	1890.	1865.	1880.	1885.	1890.		1865.	1880.	1885.	1890.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>				
Sixth (sixième).....	4.16	12.50	10	7.50	4.16	8.33	.....	7.50	4.16	24	24	a20	20.00
Fifth (cinquième).....	4.16	16.00	10	7.50	4.16	8.00	.....	7.50	4.16	24	25	a20	20.00
Fourth (quatrième).....	8.00	12.00	10	7.50	8.00	8.00	.....	7.50	4.00	25	25	a20	20.00
Third (troisième).....	16.00	12.00	15	14.63	8.00	8.00	.....	7.32	4.00	25	25	a20	20.50
Second.....	15.38	12.00	15	7.32	7.69	8.00	.....	9.75	3.84	26	25	a20	20.50
Rhetoric.....	7.69	12.00	15	7.32	7.69	8.00	.....	9.75	3.84	26	25	a20	20.50

a Two hours were assigned for drawing each week in addition to the twenty hours of required class time.

Summarized view of distribution of time in lycée course leading to baccalaureate of letters (classes sixième through rhetoric).

Studies.	1865.	1880.	1885.	1890.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
Letters: Latin, Greek, and French.....	63.00	53.68	62.80	62.53
English or German.....	8.05	11.41	10.00	8.23
History and geography.....	9.40	14.09	15.00	12.34
Science.....	9.30	12.75	12.50	8.64
Drawing.....	7.00	8.07		8.23
Religion.....	3.34			

It should be noted that the number of class hours in 1865 was in reality greater than appears from the above table. For the sixth and fifth classes (*sixième* and *cinquième*) the total was 28 hours, 2 hours being assigned in each to music and 2 to gymnastics. For the fourth and third classes (*quatrième* and *troisième*) the total was 27 hours, 2 hours being assigned in each of these classes to gymnastics. The proportional amount of time given to the branches of study is not affected by these exercises, while the table is simplified by their omission. The removal of gymnastics from class time is not because physical exercises are less esteemed than formerly; they are provided for in extra class hours, which arrangement accords with the better conceptions that now prevail as to the place and bearing of this part of training. Religion was omitted from the class time in the programmes of 1880.¹ Drawing assigned to hours out of class in 1885 was restored to its old position in 1890. The efforts at reducing the number of class hours are all prompted by the stand made against overpressure, which it is generally admitted has become a great evil. The table shows plainly the tenacity of the old conception of liberal education. Latin, Greek, and French declined slightly in 1880 in favor of history, geography, and sciences. The tendency since that year has been to increase the time devoted to the former subjects, at the expense, however, of modern languages and of science rather than of history.

In the upper classes—third through rhetoric—French has gained relatively. Greek has larger recognition in the programme of 1890 than that of 1880.

As regards the treatment of studies, the most important modification in the work of the *lycées* accomplished by the new regulations pertains to methods rather than to subjects. Some indication of the changes in this respect is made in the published scheme of study which is given in full, pages 120–124, exercises added or substituted since 1885 being marked by stars. Language is still the chief subject in the course, but

¹ By a decree of December 24, 1881, issued at the instance of M. Paul Bert, then minister of public instruction and worship, it was ordered that this matter should be regulated in accordance with the wishes of parents. Clergy of all denominations are consequently admitted to the *lycées*, with the privilege of giving religious instruction outside of class hours.

the native tongue and modern languages receive the same careful elaboration as Latin. Drill in vocabularies is made a more prominent feature than formerly. The oral and written exercises are more definite and varied, the grammatical part proceeds more gradually. In Latin the written exercises are diminished slightly and the amount of required reading increased.

Geography is somewhat extended, more attention being given to the geography of America, and that of France pursued more in detail. The ground covered in history remains about the same, although the time devoted to the subject is reduced. The same is true for the sciences, in which category mathematics is included. In both cases it is supposed that the course can be completed in the shorter time by the use of better pedagogical methods.

As to the elementary division of the *lycée*, which, as stated, is not comprised in the table, two changes since 1865 deserve attention, viz, a reduction in the number of hours and the removal of Latin, which then appeared in the eighth or first preparatory class. The time thus gained has been given to French.

The class of philosophy occupies a peculiar position in the *lycée*; under the old programmes it followed the first examination (held before the *facultés*) for the degree of bachelor of letters. The endeavor is made to give its studies the university character, and many prominent men have advocated its removal to the *facultés*, but as the change would involve also complete separation of the bachelor's diploma from the *lycée* course, it can not be accomplished at present. It would be difficult to convey an idea of the modifications in the course of the class of philosophy without going more into detail than is possible here. The distribution of time in this class at the dates selected for comparison was as follows:

Time-table, class of philosophy.

Dates.	Hours in class each week.	Distribution of hours.							
		Philosophy.	French authors	Greek and Latin authors	English or German.	History	Science	Drawing.	Music. Religion.
1865.....	29	8	(2)		2	2	10	2	2
1880.....	25	8		1	1	3	10	2	
1885.....	20	8		1	1	2	8		
1890.....	20	6.75			1½	2.25	6	2	

^a Some hours are reserved for special conferences or lessons; of these twelve are given during the year to hygiene.

Change in the baccalaureate.—As the bachelor's degree is the goal of the *lycée*, the changes in this respect are of greater significance than the remodeled programmes. It will be remembered that the plan of Minister Duruy showed a bifurcated course after *troisième*.¹ It was

¹ See plan, p. 110.

possible for students to enter the scientific division without having passed through any portion of the classical course; they might enter the class of preparatory mathematics from the special secondary course or from other institutions upon examination. In a year they passed into elementary mathematics, there mingling with students from *both troisième* and *seconde*. This in itself is an irregularity hateful to the French mind. The studies of the scientific classes were determined entirely by the admission requirements of higher technical schools; hence in the judgment of those who advocated science on its merits "the programmes of bifurcation systematically stripped the scientific course of an elevated and philosophical character." Nor did the expedient answer well the purposes for which it was adopted—the professors of the higher schools complained that the students from the mathematical course could not hold their own with those who had finished the course in letters. To complete the anomaly, the science course had also its baccalaureate; this excited all the classicists. The situation was aggravated by the fact that the degree of bachelor of science required one year less of work and but one examination.

Since the diploma carried prestige, the course of science drew students away from that of letters. Between 1865 and 1867 the enrollment of the former more than doubled both in the *lycées* and in the communal colleges, which include the superior classes. Moreover, the ratio of students in the scientific course to the total in the superior division increased. For example, in the *lycées* it was 29.6 per cent in 1865, 37.3 per cent in 1876, and 39 in 1887. Here was undoubtedly a prime cause of opposition to the course. It is not surprising that the commission should have pronounced the doom of this bifurcation, which had not the value of a parallel course nor the completeness of a single course.

For the three bachelors' degrees¹ there was substituted by the decree of August 8 a single bachelor's degree. This requires two examinations; the first following the class of rhetoric; the second, a year later, following the class of philosophy. All students must pursue the same course to the end of rhetoric. In the following year, *i. e.*, philosophy, a trifurcation takes place, and the candidate may choose one of the three branches. According to that choice, he who successfully passes the final examination will have his diploma inscribed: "*Lettres, philosophie*;" "*lettres, mathématiques*;" or "*lettres, sciences physiques et naturelles*," as the case may be.

This change viewed in one way appears to be the victory of the literary over the scientific side, while viewed in another it indicates the determination to make the intrinsic value of the scientific course equal to that of the classical.

The examinations are passed as heretofore, not before the professors of the *lycées* but before the State *facultés*, *i. e.*, professional bodies who have had nothing at all to do with the instruction of the candidates. This policy is opposed in many quarters for reasons which can not

¹ As explained, p. 110, note 4. There were two grades of the degree of bachelor of science.

easily be set aside. It is no uncommon occurrence for the best scholar in a *lycée* to be overcome with confusion in presence of the strange jury and barely escape being "plucked." On the other hand, students who could not possibly pass at the Sorbonne or before other strict *facultés* have been known to take themselves off to some of the less exacting provincial *facultés* and there secure the coveted prize. To guard against these irregularities a new device has been adopted. This is the *livret scolaire*, or college certificate, as we might render it. This certificate presents a full report of the candidate's standing in his *lycée* through all the classes of the superior division, duly signed by the chief of the institution. This certificate, if presented at all, must be presented before the *faculté* of the district (*académie*) to which the particular *lycée* belongs. It is noticeable, however, that the language of the decree leaves it optional with the candidate to produce his *livret scolaire*.¹

The nonclassical course of the lycées.—Much more radical than the changes in the classical course of the *lycées* are those in the nonclassical. This course, as we have seen, was created in 1865 under the name of special secondary (*enseignement secondaire spécial*). It had its own programme (covering at first four years, increased subsequently to six), its own professors, and its own normal school (*École normale spéciale de Cluny*). Its attractions were increased by a diploma (*baccalauréat de l'enseignement secondaire spécial*) which threatened to become a rival to the bachelor's degree through the mere force of numbers. The special character of the course consisted in the preparation which it was supposed to offer for business life, a purpose opposed to the ideal of culture fostered in the *lycée*. The impossibility of maintaining this character soon became apparent, and it was practically abandoned by the closing of the normal school of Cluny in 1891. The need of a course wholly modern in its spirit had, however, been abundantly demonstrated by the enrollment in the special course which, in 1887, comprised nearly one-third of all the students in the *lycées*. The special course became *enseignement secondaire moderne* by decrees of June 4, 1891. The new programme² and the instructions accompanying it are evidently intended to bring the reorganized course into closer touch with the traditional spirit of liberal education, while at the same time answering the demands of students whose interests lie wholly in the practical affairs of modern life.

The programme offers an interesting study of adaptations. As may be seen by an examination of the table below, it gives largest scope to modern languages and the studies that relate to the conduct of life or to man's social state, viz, literature, history, ethics, law. It has been aptly characterized as "literary, moral, æsthetic, and scientific."³ Moreover

¹ Bulletin administratif, August 10, 1890.

² *Ibid.*, No. 961 (June 20, 1891), pp. 603-666.

³ L'enseignement secondaire moderne, par Eugène Lintilhac, Rev. péd., October, 1891, p. 298.

the claim is made for it that although modern it is classic. This claim is based upon the proposed method of treating the modern languages and literature, especially French. On the grammatical side, the historical development of the language is to be considered, while the study of the several literatures is to be made wholly from authors of the highest order. The works selected present an interesting epitome of modern classical literature as judged from the French standpoint.

The modern course is declared to be for "average minds;" it does not contemplate the training which makes scholars, leaders of thought, investigators. Its most original feature is the expedient for placing minds on the historic plane, or as expressed by the writer quoted above, "for putting average minds as quickly as possible in possession of those general notions which form the real basis of the moral and intellectual treasure of humanity and rendering them capable of adapting those traditional ideas and knowledges to the uses of modern life." Whether or not this is a worthy end, the means proposed for its accomplishment deserve notice. It is to be done by the interpretation of the master works of antiquity based upon translations. These interpretations are to be presented by professors thoroughly acquainted with the original, and able, if need be, to translate as they interpret. Thus, while modern languages and literature are the center of the programme, they will not be wholly detached from historic relations.

Table showing distribution of time in class in modern secondary course. *a*

Classes.	French.	German.	Language and literature, English, Italian, or Spanish.	History.	Geography.	Elements of law and political economy.	History of civilization and of art.	Practical morals.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
Sixth (Sixième)	26.08	26.08	.....	6.52	6.52	.....	.....	.....
Fifth (cinquième)	26.08	26.08	.....	6.52	6.52	.....	.....	.....
Fourth (quatrième)	18.00	16.00	24.00	6.00	4.00	.....	.....	4.00
Third (troisième)	19.10	12.76	12.76	6.38	4.25	.....	.....	.....
Second	18.00	<i>b</i> 12.00	12.00	6.00	4.00	.....	.....	.....
First (première):								
Science .....	.....	<i>bc</i> 3.84	3.84	5.76	5.76	7.69	.....	.....
Letters	18.37	<i>bc</i> 4.08	4.08	6.12	6.12	8.16	12.24	.....

Classes.	Philosophy.	Mathematics.	Book-keeping.	Natural history.	Physics and chemistry.	Natural sciences.	Writing.	Drawing.	Total number of hours.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	
Sixth (Sixième) .....	.....	10.86	.....	6.52	.....	.....	4.34	13.07	23
Fifth (cinquième) .....	.....	10.86	.....	6.52	.....	.....	4.34	13.07	23
Fourth (quatrième) .....	.....	12.00	.....	.....	.....	.....	4.00	12.00	25
Third (troisième) .....	.....	19.10	.....	.....	12.76	.....	.....	12.76	23½
Second .....	.....	18.00	.....	.....	18.00	.....	.....	12.00	25
First (première):									
Science	11.53	23.07	3.84	5.76	17.30	.....	.....	11.53	26
Letters	24.49	.....	4.08	.....	.....	6.12	.....	6.12	24½

a For programme, see Bulletin administratif, No. 961 (June 20, 1891).

b Language and literature.

c Optional.

The importance of the course is enhanced, as heretofore, by a diploma (*baccalauréat de l'enseignement secondaire moderne*). This is to be awarded upon the successful passing of two examinations at an interval of three months. The second of these examinations is divided into three orders between which the candidates may choose. According to the choice, his diploma is inscribed, "*Lettres, philosophie*;" "*lettres, sciences*;" or "*lettres, mathématiques*."¹

To sum up the results of the new measures, they relax the rigidity and relieve the routine of life within the lycée; continue the reduction in written exercises and place more stress upon acquaintance with classic literature; do away with the triple baccalaureate, placing all candidates for a degree upon the same footing, and substitute for the special course a modern course which aims to be as separate from utilitarian purposes as the classical.

PROGRAMME OF STUDIES (1890) IN THE CLASSICAL COURSE OF THE FRENCH LYCÉES.

[The stars indicate exercises that constitute material changes (either by way of additions or substitutions) made since 1885. In the preparatory class and in the eighth and seventh classes the number of hours of class work per week is 20.]

PREPARATORY CLASS.

(Age 8 years.)

French.—Nine and a half hours a week. Reading, spelling, writing. Recitations of choice selections.* Formation of sentences, and the most elementary rules of grammar.

German or English.—Four hours a week. Exercises in reading and writing. Pronunciation. Accent. Recitation of selections.* Writing German.* Drill in vocabularies. Simple exercises in counting. Short written exercises in the second semester.*

History.—One and a half hours a week. Biographies of illustrious men—travelers, patriots, inventors. Talks on great personages in French history down to 1789. Great events.

Geography.—One and a half hours a week. Meaning of the principal terms in physical geography, illustrated from the town or county. Pointing out on globes and wall maps the position of continents and oceans, with special attention to Europe and France.

Arithmetic.—One and a half hours a week. Mental arithmetic—whole numbers.

Object lessons.—One hour a week. Coal, metals, coins, clouds, rain, snow, ice, springs, brooks, lakes, wells, canals, sea water, salt, wind, storms, familiar animals, and plants. [This set of subjects lasts two years.]

Drawing.—One hour a week. Straight lines, angles, circles, polygons, stars, ellipses, spirals, the curves of plants, first notions of perspective. [This set of subjects lasts three years.]

EIGHTH CLASS.

(Age 9 years.)

French.—Nine hours a week. Reading, spelling, writing, grammar. Recitation of selections.* Exercises in changing active verbs to passive and the present tense to the future. Descriptions reproduced.

¹ Bulletin administratif, No. 961 (June 13, 1891), p. 573.

German or English.—Four hours a week. Drill in vocabularies.* Conversations about familiar objects.* Explanation and recitation of easy passages. Oral translation of selections from French and into French. Exercises upon the German verbs, sein, haben, and werden. Reading and recitation of selections and little compositions.

History.—One and a half hours a week. Outline of French history to the death of Louis XI.

Geography.—One and a half hours a week. Elementary geography of Europe, Asia, Africa, America, and Oceanica.

Arithmetic.—Two hours a week. Whole numbers. Exercises in mental arithmetic. Easy problems.

Object lessons.—One hour a week. Exercises on some of the objects mentioned in the programme for the preparatory class.

Drawing.—One hour a week. Same as for the preparatory class.

SEVENTH CLASS.

(Age 10 years.)

French.—Nine hours a week. As in previous years. Written exercises and drill in syntax.

German or English.—Four hours a week. Grammar. Auxiliary and irregular verbs. Easy translations and dictation exercises.* English text—Sanford and Merton, and Old Poz.

History.—One and a half hours a week. History of France from Louis XI to 1815.

Geography.—One and a half hours a week. Elementary geography of France.*

Arithmetic and geometry.—Two hours a week. Whole numbers and decimals. Metric system. Geometrical figures.

Stones and soils.—One hour a week. Limestones, lime-kilns, mortars, plaster, clay, bricks, pottery, quartz, flint, grindstones, granite, sands, drift, mold, soils, fossils, quarries, volcanoes.

Drawing.—One hour a week. Same as for the Preparatory Class.

[In the sixth, fifth, and fourth classes the number of hours of class work per week is 20.]

SIXTH CLASS.

(Age 11 years.)

French.—Three hours a week. Grammar. Extracts in prose and verse from French classics. La Fontaine's fables. Simple compositions.

Latin.—Ten hours a week. Elements of grammar. Epitome historiae Græcæ. Translation of French phrases into Latin. Translations from Latin into French.

German or English.—Two and a half hours a week. Grammar, reading, conversation, written exercises. Drill in vocabularies.* Study of grammatical forms.* English texts—Aikin and Barbauld's Evenings at Home. Primer of English history.

History.—One and a half hours a week. Ancient history of the Orient—Egypt, Assyria, Palestine, Phœnicia, Persia.

Geography.—One hour a week. The continents* and the Mediterranean basin. Elements of mathematical geography.*

Arithmetic.—Half hour a week. Common fractions. Decimals.

Zoölogy.—One hour a week. Man. Vertebrates. Articulates. Worms. Mollusks. Fauna of the principal regions of the globe.

Drawing.—One and a half hours a week. Perspective with shadows. Drawing from ornaments in relief, from architectural fragments, from the human head. [These subjects serve for two years.]

FIFTH CLASS.

(Age 12 years.)

French.—Three hours a week. As in preceding year. Extracts from La Fontaine, Racine, Fénelon.

Latin.—Ten hours a week to January 1; eight hours thereafter. Grammar, syntax, elements of prosody. Extracts from Phædrus, Ovid, and Nepos. Latin theme, written and oral.

Greek.—Two hours a week from January 1. Grammar, accent, paradigms.

German or English.—Two hours a week. Reading, writing, conversation, translation. English texts. Drill in vocabularies.* Systematic study of grammatical forms and their applications.* De Foe's Robinson Crusoe. Franklin's Autobiography. Primer of the History of Greece.

History.—One and a half hours a week. History of Greece.

Geography.—One hour a week. Physical and political geography of France and her colonies.*

Arithmetic.—One-half hour a week. Rule of three. Interest, discount, measurement of areas and volumes.

Botany and Geology.—One hour a week. Organs of a plant—root, stem, leaf, flower, fruit, seed. Divisions of the vegetable kingdom illustrated. Outlines of the flora of the principal regions of the globe.* Principal rocks. Continuous changes of the earth's crust. Special study of the geology of France.*

Drawing.—See preceding year.

FOURTH CLASS.

(Age 13 years.)

French.—Two hours a week. Grammar finished. Extracts from Racine, Boileau,* Bossuet,* Fénelon,* Voltaire.* Paraphrases of French verse.* Differences between French and Latin construction.

Latin.—Five hours a week. Extracts from Vergil and Ovid. Caesar's Gallic War. Quintus Curtius. Cornelius Nepos.* Latin composition, oral and written.

Greek.—Six hours a week. Grammar, elements of syntax, simple compositions. Extracts from Xenophon and Lucian. Babrius.*

German or English.—Two and a half hours a week. Reading, writing, conversation, translation. Drill in vocabularies.* Coins, weights and measures.* Idioms. Grammatical forms.* English texts—De Foe's Robinson Crusoe, Irving's History of Columbus, Miss Corner's History of Rome.

History.—One and a half hours a week. History of Rome.

Geography.—One hour a week. The American continent and physical geography.

Geometry.—One and a half hours a week. Straight lines, angles, triangles, parallelogram, circle, secant, tangent, measure of angles.

Drawing.—One and a half hours a week. From architectural fragments. The human figure, from prints and bas-reliefs. Some mechanical drawing of architectural designs.

[In the third and higher classes the number of hours of class work per week is 20½.]

THIRD CLASS.

(Age 14 years.)

French.—Two hours a week. Grammatical and literary study of the French language. Authors—Corneille, Racine, Boileau, Montesquieu. Compositions. Outlines of literary history. Choice selections from authors of the sixteenth to the nineteenth centuries. Paraphrase of French verse.

Latin.—Five hours a week. Grammar reviewed. Prosody. Considerable portions of Livy, Cicero, Pliny, Sallust, Vergil, Terence.

Greek.—Five hours a week. Grammar continued. Extracts from Homer, Herodotus, Xenophon. Translations into Greek.

German or English.—One and a half hours a week. Drill in vocabularies. Recitations from authors. Reading at sight easy passages. Conversation. Grammatical written exercises. Translations. English texts—Vicar of Wakefield. Tales from Shakespeare, extracts from Macaulay's History of England.

History.—One and a half hours a week. History of Europe, and particularly of France, from 395 to 1270.

Geography.—One hour a week. Geography of Africa, Asia, Oceanica.

Arithmetic, Algebra, and Geometry.—Three hours a week. Arithmetic finished, including square root and proportions. Algebra through simple equations of one unknown quantity. Plane geometry finished through area of the circle.

Drawing.—One and a half hours a week. Decorative figures. Caryatides. Friezes. Doric, Ionic, and Corinthian orders. The human figure, and figures of animals.

SECOND CLASS.

(Age 15 years.)

French.—Three hours a week. Selections from ten authors covering the sixteenth to the nineteenth centuries inclusive. Grammatical study and composition.

Latin.—Five hours a week. Prosody. The metres of Horace. Authors—Vergil, Horace, Cicero, Livy, and Tacitus.

Greek.—Five hours a week. Grammar reviewed. Considerable portions of Homer, Euripides, Plato, and Plutarch. Written translations.

Literary History.—One hour a week is devoted to the history of Greek (10 lectures), Latin (10 lectures), and French (15 lectures) literatures. This hour is taken from the hours appropriated to the three languages.

German or English.—One and a half hours a week. Grammatical study. Reading, conversation, translation, composition. English texts—Julius Cæsar, The Deserted Village, a romance of Scott, a Christmas carol, David Copperfield, extracts from English historians.

History.—One and a half hours a week. History of Europe, and particularly of France, from 1270 to 1610.

Geography.—One hour a week. Geography of Europe—political, physical, commercial.* Meteorology. Climatology. Productions. Commercial relations. Steam and telegraph lines.

Algebra and Geometry.—One and a half hours a week. Algebra continued through equations of several unknown quantities. Solid geometry to the cone.

Drawing.—Two hours a week. Same as in the preceding year.

CLASS OF RHETORIC.

(Age 16 years.)

French.—Four hours a week. Eleven authors of seventeenth, eighteenth, and nineteenth centuries. Fifteen lessons on the history of French literature from the time of Louis XIII.

Latin.—Four hours a week. Portions of Lucretius, Vergil, Horace, Cicero, Livy, and Tacitus.

Greek.—Four hours a week. Portions of Homer, Sophocles, Plato, and Demosthenes.

German or English.—Two and a half hours a week. Authors in English—Shakespeare, Byron, Tennyson, Dickens, and George Eliot.

History.—One and a half hours a week. History of Europe, and particularly of France, from 1610 to 1789.

Geography.—One hour a week. Physical, political, administrative, and economic geography of France and its colonies.

Mathematics.—One and a half hours per week. Arithmetic: Review through square root. Algebra: Review and continuation through equations of the second degree. Geometry and Cosmography: Solid geometry finished—through the sphere. The celestial sphere. Earth, sun, time, moon, eclipses, planets, stars, universal gravitation, tides.

Drawing.—Two hours a week. The human head from nature. Landscape from prints and nature.

CLASS OF PHILOSOPHY.

(Age 17 years.)

Psychology, Logic, Ethics, and Metaphysics.—Six hours a week the first semester, seven and a half the second. The two French authors are chosen each year from a list containing works of Descartes, Malebranche, Pascal, Leibnitz, Condillac, and Cousin. The course includes an account of sensibility, intelligence, and volition, of formal and applied logic, of conscience and duty, of family and country, of political duties, of labor, capital, and property, of immortality and natural religion.

English or German.*—[Optional one and a half hours a week.] Conversations upon works read. Shakespeare—Hamlet, Macaulay—Essays, George Eliot—Adam Bede, The Mill on the Floss.

History.—Three hours a week the first semester one and a half the second. Contemporary history, 1789 to 1889.

Physics and Chemistry.—Four and a half hours a week. Physics: Gravity, properties of liquids and gases, specific gravity, barometer, heat, electricity, magnetism, acoustics, optics, applications of physics, steam engines, magneto-electric machines, electro-plating, telephone. Chemistry: Hydrogen, oxygen, nitrogen, chlorine, sulphur, phosphorus, carbon, silicon, and their most important combinations. General notions of the metals, oxides, and salts. Principal organic compounds. Nomenclature and notation.

Physiology, Animal and Vegetable.—One and a half hours a week. Nutrition, organs of sense, voice, apparatus for movement, nerves. Vegetable nutrition and reproduction.

Hygiene.—Twelve lessons, one hour each. Water contamination, means of purifying; ventilation; food, nutritive properties; stimulants, narcotics, cause and prevention of contagion, domestic and public sanitation.

Drawing.—Two hours a week. Same as in the preceding year.

By a decree of January 30, 1865, which still remains in force, instruction in music is obligatory in the *lycées* for all pupils below the fourth class (*quatrième*) and optional for all above.

CHAPTER IV.

BRIEF VIEW OF THE EDUCATIONAL SYSTEMS OF ENGLAND AND SCOTLAND, AND OPERATIONS FOR 1890-91.¹

MATERIAL CONSULTED.—*Elementary education laws: England, 1870, 1873, 1876, 1891; Scotland, 1872, 1878, 1883.*—*Annual reports and regulations (codes).*

Great Britain, constitutional monarchy; area, England and Wales, 58,186 square miles; population (estimated, 1891), 29,081,047; Scotland, 29,820 square miles; population, 4,033,103.

A sense of public responsibility with respect to the education of the masses and a deep-seated regard for local independence and local initiative mark the educational policy within the British Empire. It is the excess of one or the other of these principles which gives special character to this policy as it operates in Great Britain, in Ireland, in the colonies, and in British India and other dependencies.

The feeble beginning in 1833 (*i. e.*, the appropriation of \$100,000 for school buildings) scarcely foreshadowed the part which the General Government was to take in the development of this interest in Great Britain. Without encroaching at all upon local rights or assuming local obligations, it has become the organizing power in elementary education and the chief source of its support, contributing in 1890-91 about 45 per cent of the income of elementary schools, a proportion since increased to 70 per cent or more as regards England, by the grant in lieu of fees.

In England, as yet, only elementary instruction has been brought into the form of a system, which is determined in its main features by the law of 1870. The law, passed two years later (1872), for Scotland has a more extensive range. In this, secondary schools are distinctly recognized; moreover, Scotch universities have a very close relation to the Government, since parliamentary grants provide the larger part of their income. Hence, scholastic institutions of all grades in Scotland have a basis for organic union, which is wanting in England. Nevertheless, taken in its full sense, the word system must be considered as relating only to the elementary schools of Scotland, which are organized on substantially the same lines as those of England.

SUPERVISION AND CONTROL.

In both divisions of Great Britain the action of the General Government is limited to securing, through local agencies, sufficient school

¹ Prepared by A. Tolman Smith, specialist in British, French, and Belgian school systems.

accommodation, and to maintaining an inspection of individual schools with respect to the conditions which entitle local managers to claim a share in the appropriations from the public treasury. This action is exercised through committees of the privy council (education department for England and the same for Scotland). The vice-president of each committee¹ is the virtual head of the respective system and represents its interests in the House of Commons when the appropriations or general regulations (codes) are under discussion. The local managers with whom the departments deal are (1) elected boards serving for three years; (2) private bodies or individuals whose schools are subject to Government inspection.

The manner in which the government inspection is carried out has among other advantageous results that of securing an unusual degree of precision in the official statistics. Once a year every school must be examined by a government inspector, who tests each class in the work of a prescribed programme, examines the buildings and premises with reference to specified requirements, and passes judgment upon the general organization and conduct of the school. The results of the examination are recorded upon an official form, which is uniform for all inspectors. Upon this same form are entered, also, the number of children present at the examination and particulars taken from the teacher's register, *i. e.*, enrollment, average attendance, number of sessions, etc. These registers are also uniform for all schools; they must be original copies and contain no erasures. From the inspectors' reports the official statistics are compiled, and upon the basis of the same reports the government grant is distributed to the managers of the schools.

For the maintenance of this inspection England is divided into ten districts, each under a chief inspector. Under these is a force of 107 inspectors, 45 subinspectors, and 152 inspectors' assistants. There are also two chief inspectors for training colleges, a special inspector of music, a directress of needlework, and an inspectress of cookery and laundry work.

Scotland is divided into three districts, each having a chief inspector. Under these are 25 inspectors, 4 subinspectors, and 21 assistants.

SCHOOL ACCOMMODATION, ENROLLMENT, AND AVERAGE ATTENDANCE.

By the coöperation of public and private agencies school accommodation has been provided in England for 5,641,360 children and in Scotland for 735,889. In 1890-91 the schools on the Government list in England had an enrollment of 4,833,329 pupils and the same in Scotland an enrollment of 680,580.

The enrollment in England was equivalent to 18.6 per cent and in Scotland to 16.87 per cent of the total population (census 1891). The

¹ Sir W. Hart Dyke, vice-president for England, at the date of the last report issued, was succeeded August 18, 1892, by Right Hon. A. H. Dyke Acland. The vice-president for Scotland is the Marquis of Lothian.

English enrollment includes children 3 to 14 years of age, inclusive, and is 54 per cent of the total population of those ages, or 63 per cent of the sixth-sevenths reckoned for elementary school attendance.¹ The enrollment for the ages 5 to 14, inclusive, is 65 per cent of the estimated population of those ages, and 76½ per cent of the six-sevenths as before stated. In Scotland, where the school age is 5 to 14, inclusive, the enrollment is equivalent to 78 per cent of the population between those ages.

In England the average attendance maintained was 77.7 per cent of the enrollment, and in Scotland 79.3 per cent. Of the pupils enrolled in England 39.8 per cent, and in Scotland 84.76 per cent, were in board schools. Altogether, 2,298 boards have been formed in England (Wales included), representing about 64 per cent of the population², while in Scotland there are 979 boards, comprising 92 per cent of the population. In other words, fully one-third of the people of England depend entirely upon private (voluntary) schools, chiefly denominational, while in Scotland the board school system is nearly universal.

The official reports, which are annually published by the departments, give detailed statistics only for the schools actually inspected during the current year. This number is always a little below the total borne on the list.

The statistics presented in the further consideration of the systems have reference to the schools actually inspected in 1890-91.

In the following summarized view comparisons are made with the conditions at earlier dates:

	England and Wales.		Scotland.	
	1891.	Increase or decrease since 1876.	1891.	Increase or decrease since 1880.
I. Estimated population	23, 081, 047	<i>Per cent.</i> 19.95 inc.	4, 033, 103	<i>Per cent.</i> 8.84 inc.
II. Number of schools inspected	19, 649	36.75 inc.	3, 105	1.33 inc.
III. Number of departments:				
1. Day	29, 533	42.10 inc.	3, 453	26.75 inc.
2. Night	1, 388	5.84 dec.	207	25.26 dec.
Accommodation:				
1. Day schools	5, 628, 201	64.26 inc.	723, 735	21.7 inc.
2. Night schools (not connected with day schools)	9, 854	33.46 dec.	270	80.16 dec.
Present at examination:				
1. Day scholars	4, 426, 060	83.48 inc.	617, 448	31.2 inc.
2. Night scholars	49, 316	19.89 inc.	12, 435	16.03 dec.
Average attendance:				
1. Day scholars	3, 749, 956	88.95 inc.	538, 365	33.05 inc.
2. Night scholars	51, 974	4.24 inc.	13, 513	5.48 dec.
IV. Number of teachers:				
Certificated	47, 823	107.44 inc.	8, 151	52.92 inc.
Assistant	23, 508	640.87 inc.	1, 437	223.64 inc.
Pupil	28, 131	12.72 dec.	3, 904	14.8 dec.
Studying in training colleges	3, 310	10.07 inc.	859	4.48 dec.

¹In estimating the school provision required, only six-sevenths of the population are considered, the remainder being presumably of the class who will not patronize elementary public schools.

²School attendance committees must be appointed by local authorities in districts not under school boards, to report violations of the school law.

FINANCES.

The total income of elementary schools (evening included) for 1890-91¹ was, in England, £7,813,706 8s. 11d. (\$37,974,613.30²); in Scotland, £1,201,033 (\$5,837,019), derived as follows:

	England.	Scotland.
	<i>Per cent.</i>	<i>Per cent.</i>
Local taxes (rates), board schools only.....	18.56	22.53
Contributions, denominational schools chiefly.....	10.00	1.30
Tuition fees (school pence).....	25.20	5.37
Government grant.....	42.66	α 70.80
Endowments and other sources.....	3.60	.....

α One-third in lieu of fees remitted.

¹ The year ended August 31. The act remitting fees went into operation September 1.

The scope of the act is shown by the following sections:

1. (1) After the commencement of this act there shall be paid out of moneys provided by Parliament, and at such times and in such manner as may be determined by regulations of the education department, a grant (in this act called a fee grant) in aid of the cost of elementary education in England and Wales at the rate of ten shillings a year for each child of the number of children over 3 and under 15 years of age in average attendance at any public elementary school in England and Wales (not being an evening school) the managers of which are willing to receive the same and in which the education department are satisfied that the regulations as to fees are in accordance with the conditions in this act.

* * * * *

2. (1) In any school receiving the fee grant—

(a) Where the average rate of fees received during the school year ended last before the first day of January, one thousand eight hundred and ninety-one, was not in excess of ten shillings a year for each child of the number of children in average attendance at the school, or

(b) For which an annual parliamentary grant has not fallen due before the said first day of January:

No fee shall, except as by this act provided, be charged for children over 3 and under 15 years of age.

(2) In any school receiving the fee grant where the said average rate was so in excess, the fees to be charged for children over 3 and under 15 years of age shall not, except as by this act provided, be such as to make the average rate of fees for all such children exceed for any school year the amount of the said excess.

* * * * *

5. If at any time after the expiration of one year from the commencement of this act it is represented to the education department that there is in any school district, or in any part of a school district, an insufficient amount of public school accommodation without payment of fees for children over 3 and under 15 years of age, for whom such accommodation is desired, and the education department are satisfied after inquiry that such is the case, the department shall direct the deficiency to be supplied in the manner provided by sections nine and ten of the elementary education act, 1870, and every other section enabling them in that behalf, with respect to the supply of public school accommodation; and the expression "public school accommodation" in that act shall include public school accommodation without payment of fees. (El. ed. act, 1891, secs. 1, 2, 5.

² Rate of exchange used, \$4.86 to a pound. In previous reports \$5 has been employed.

The total expenditure in England was \$38,052,123, slightly exceeding the income for the year. In Scotland it was \$5,943,425. This represents for England an expenditure of \$10.14 and in Scotland \$10.73 per capita of average attendance in the inspected day schools.

Fees remitted in Scotland by laws of 1889 and 1890 and in England by law of 1891 may still be charged if managers forego the fee grant and parents make no objection. That a free school system is generally desired is indicated by the fact that in England 74 per cent of elementary schools and in Scotland the entire number are now free for children of legal school age—*i. e.*, 3 to 14 inclusive in the former, 5 to 14 inclusive in the latter.

Besides the proportional part of the current income furnished from local sources, as shown above, local managers must provide buildings and equipments. The general government has aided in this work by loans amounting in England to £23,846,174 1s. 4d. (\$115,892,409) and in Scotland to £4,859,357 16s. 7½d. (\$23,616,471).

MEASURES AFFECTING ATTENDANCE.

Since 1890 the policy of allotting the greater part of the grant¹ upon the results of the examination of individual pupils in the three obligatory subjects (reading, writing, and arithmetic) has been discontinued and the average attendance has been made the basis. The mode of determining this average is uniform for all schools, *i. e.*, by dividing the actual number of half-day attendances by the minimum number of half days (400) on which the school must have been in session. Managers, and indirectly teachers, have thus a stimulus to securing as large an attendance as possible. In Scotland their efforts are aided by

¹ The grant is comprised in the following divisions:

(1) A fixed grant of 12½s. to 14s. (10s. to 14s. Scotland) per pupil in average attendance.

(2) A grant of 1s. to 1½s. for discipline and organization, reckoned on average attendance.

(3) Various grants in class and specified subjects. In Scotland a grant of 1s. to 3½s. is also allowed, according to the report on the general character of the instruction in the three elementary subjects. Special grants (£10 to £15) are also allowed under specified conditions for schools in thinly populated districts. Grants of £1 to £5 are also allowed in respect to each pupil teacher required to make up the minimum staff who passes a specified examination and of £10 to £15 for each assistant teacher passing the examination for a government certificate. The total annual grant to a school, exclusive of the special grants to schools in sparsely settled regions, must not exceed 17s. 6d. for each unit of average attendance or the total income from all other sources. In other words, the government seeks to stimulate, but not to replace, local effort.

In England infant schools are treated separately, grants for them reckoned on the basis of average attendance being:

(1) Fixed grant, 7s. to 9s. per capita of average attendance.

(2) Variable grant, 2s., 4s., or 6s.

(3) Grant for singing, 6d. or 1s.

(4) Grant for needlework, 1s. per capita of average attendance of girls.

the compulsory law which applies to all children 5 to 14 years of age, unless they have secured a certificate of exemption. This may be obtained by passing the examination required at the end of the fifth school year, which is generally reached at 11 years of age. In England the ages of compulsory attendance, as well as the standard of exemption, are left to local managers, but every school board must make by-laws upon the subject.

The education laws also make provision for the school attendance of children of legal school age who may be employed part of the time under the laws regulating such matters, the departments determining the limits of attendance for such children. The English enrollment includes 173,040 half-timers, as they are called, of whom more than half are in Lancashire and one-fourth in Yorkshire. The Scotch schools enroll 30,602 half-timers.

TEACHERS.

As to teachers, the central departments require that the principal teacher of every school should have a Government certificate (awarded upon examination after a probationary term of teaching) and the employment of an assistant teacher for every 50¹ additional pupils in attendance after the first 60, or a pupil teacher for every additional 30.

The persons qualified to be recognized as assistant teachers are pupil teachers who have completed their engagement with credit and passed the examination for admission to training colleges, women above 18 years of age who have passed certain specified examinations² and university graduates.

Pupil teachers are young persons between 14 and 18 years of age, whose time is divided between studying and teaching. Their service must not exceed twenty-five hours a week. Managers must make provision for the instruction of their pupil teachers, for which, as already noted, they may claim additional grants. The composition of the teaching staff for the year under review was as follows:

Teachers.

	Certificated.		Assistant.		Pupil teachers.		Additional women teachers.	Total.
	Men.	Women.	Men.	Women.	Men.	Women.		
England	19, 199	28, 624	5, 459	18, 049	6, 360	21, 771	5, 681	105, 143
Scotland	3, 838	4, 313	153	1, 284	902	3, 002	.....	13, 492

¹ An assistant teacher who holds a certificate is considered sufficient for 70 additional pupils.

² These are the various university examinations open to women and the examination of the college of preceptors for the teachers' diploma.

Average salaries. a

	Principals.		Assistants.	
	Men.	Women.	Men.	Women.
England.....	\$669. 70	\$414. 12	\$456. 45	\$336. 18
Scotland.....	805. 08	368. 91	49. 31	293. 25

a All professional sources of income for teachers, including free house rent in some cases.

The proportion of women teachers in English schools is continually increasing, having risen from 55 per cent in 1870 to 71½ per cent in 1891. In both countries the proportion of pupil teachers is declining; it is noticeable, however, that the most successful candidates for admission to the training colleges come from their ranks.

TRAINING OF TEACHERS.

The training colleges have been founded and are controlled by private authorities (chiefly denominational), but they receive annual grants not exceeding 75 per cent of their total incomes from the Government upon specified conditions. With respect to these conditions, the colleges are under Government supervision. The inspectors appointed for this service hold the examinations for teachers' certificates at the several institutions. These examinations are obligatory for students of the colleges having free (*i. e.*, Queen's) scholarships, other candidates being also admitted.

The training colleges in England, *i. e.*, 44 residential colleges of long standing and 6 day colleges (established under regulations first issued in 1890), were attended in 1890-91 by 3,806 students. As the regular course of training is two years, these colleges are prepared to furnish annually 1,900 teachers, which would be sufficient to supply the annual loss (calculated at 6 per cent) in a staff equal to two-thirds of the present number of certificated teachers. The training colleges of Scotland, 7 in number, had an attendance of 860 students, which is nearly sufficient to supply the loss in the whole body of certificated teachers. About 18 per cent of the students in the Scotch colleges combine with their training attendance upon university classes, a tendency which is fostered by the liberality of the Government in including the fees for such attendance in the legitimate expenses of the colleges.

In ranking candidates who pass the certificate examinations, special weight is given, both in England and in Scotland, to success in the examinations in science held by the Science and Art Department.

Although the course of the training colleges includes service in the practice schools, graduates of these colleges, like other candidates, must pass a probationary term of teaching before receiving their certificates.

The expenditure for the training colleges for the year under review was as follows: England, residential colleges, £180,564 9s. 5d.; day,

£8,446 12s. 11d., or a total of £189,011 2s. 4d. (\$945,055.50), of which the Government provided 66 per cent; Scotland, £40,916 11s. 2d. (\$204,582), from Government 73 per cent.

PENSIONS.

The bill for pensions to teachers has made little progress during the year, although its ultimate passage seems certain. The National Union of Elementary Teachers maintains a committee to push the measure and to create a public sentiment in its favor.

ORGANIZATION AND CONDUCT OF SCHOOLS.

The elementary schools recognized by the Government are infant schools, schools for older pupils, and night schools. In board schools sectarian instruction is strictly prohibited; in private schools it must be given, if at all, before or after the hours of secular instruction and must not be forced upon any child. Grants are made solely for secular branches. These are arranged in a progressive series of seven grades (standards), each intended to occupy a year. Since 1890 teachers have been free to classify pupils according to their attainments, so that a pupil may be in different grades in different subjects, provided, always, that he passes the lower-grade examination in a subject before being advanced to the higher.

Outside of the conditions imposed by the government as before indicated, which are intended merely to secure an economical administration of the public money and to protect the religious scruples of parents, local managers have the utmost freedom. The boards have very extensive powers, as they may levy rates for school buildings and current expenditures and develop their schools on as liberal a scale as local sentiment approves. Teachers are wholly under the control of local managers with respect to salary, tenure, etc.

The grading of schools is necessarily determined in the main by the mode of examination, the subjects additional to the obligatory branches forming an important factor in this respect.

There are either class subjects or specific subjects which may be taken by pupils above the fourth grade and for which special grants are allowed. The nature and degree of classification on the basis of these various provisions depend upon the size of the school, the arrangement of the school building, and the number and grade of the teachers. The English department places stress upon the separation of infants from older pupils, allowing a grant of 9s. per capita if the "infants" are taught as a separate department under a competent teacher, and in a room specially furnished for the work, as against 7s. where these conditions are not fulfilled. As a result of this policy, out of an average attendance of 1,121,990 in the infant grade (1890-91), 917,068 were taught in 6,924 schools, each under a certificated teacher.

All but 13 of these schools received the higher rate, *i. e.*, 9s. grant. Out of 5,309 classes, 4,224, with an average attendance of 169,996, received the 9s. rate, while 1,083, with an average attendance of 34,859, received only the 7s. rate. In two cases the grant was refused.

Infant classes have much less development in Scotland, where the recognized school age is 5 and 14, inclusive, as against 3 to 14, inclusive, in England. The children below 7 years of age, which is regarded as the upper limit of age for infants, form only 21 per cent of the enrollment in Scotland, as against 31 per cent in England.

It appears from the reports that in England 91 per cent of the schools for older scholars and in Scotland 99 per cent go beyond the bare requirements of the obligatory subjects and provide instruction in one or more, class subjects, *viz.*, English, geography, history, elementary science, special needlework for girls. The grant allowed in England for these subjects was estimated on 96 per cent of the total attendance of older scholars and in Scotland on 89 per cent of such attendance. English is the class subject most generally taken. It is worthy of note that after August, 1893, no "school for older scholars" in England will be able to claim a grant unless one class subject is taught. The remaining optional subjects,¹ classed as specific, would be considered high-school studies in this country. As they can not be taken by pupils below the fifth grade, which on the average it is supposed will be reached at 11 years of age, they form in reality an initial stage to secondary schools, and in some cities have led to the organization of what are called higher board schools. In England 90,087 pupils were presented in 1890-91 in one or more of these subjects, of whom nearly one-third were from the London schools. The number presented in Scotland was 45,386. The grant for these studies is the only portion of the government fund still allowed on the results of individual examination, all other grants as before stated being estimated at a certain rate per capita of average attendance. This policy gives a special motive to managers for securing as high an average as possible.

That it is not sufficient to overcome the various conditions which interfere with regular attendance is evident from the fact that in England the attendance is only 77.72 per cent of the enrollment (68 per cent in infant schools, 82 per cent in schools for older scholars), showing but slight increase over former years. In Scotland, where there is a uniform compulsory law, but where the severity of the climate and the large proportion of sparsely settled regions depress school attendance, the average is 79.3 per cent.

To the day schools, whose operations are here reviewed, must be

¹ Mathematics, Latin, French or German, principles of agriculture for boys, and domestic economy for girls are included in both England and Scotland. In England physiology, botany, chemistry, physics, and shorthand are also specified, and additional subjects may be taken in either country, provided a graduated scheme of instruction is arranged and approved by the department.

added the night schools, which are assuming more and more the character of continuation schools. To receive Government aid these schools must hold at least forty-five sessions. No pupil who has made less than twenty-four attendances can be presented for examination, nor in a lower standard than the third.

The following tabulation shows the status of these schools for 1890-91:

	England.	Scotland.
Number of evening schools.....	1,388	207
Average attendance.....	51,974	13,513
Number of pupils qualified by attendance for examination.....	62,617	15,613
Number examined in standard subjects.....	47,321	9,123
Percentage of passes:		
Reading.....	97	96
Arithmetic.....	83	87
Writing.....	58	71
Number taking additional subjects.....	27,547	7,138
Number of passes in additional subjects.....	18,581	6,031

Among the most important measures pertaining to elementary schools now pending are proposed new regulations for evening schools. These regulations tend to increase the provision for technical and scientific training and to systematize the instruction by means of a graduated course arranged for seven years and adapted to young people from 14 to 21 years of age, within which limits the age of night-school pupils will ordinarily fall. Freedom of classification will be secured here, as in the day schools, by allowing a pupil to be in different grades in different subjects.

CHAPTER V.

PROVISION FOR SECONDARY AND FOR TECHNICAL INSTRUCTION IN GREAT BRITAIN.¹

MATERIAL CONSULTED.—*Reports of Education Department, Scotland, 1886 to 1891-92, inclusive—Report of British Schools Inquiry Commission—Studies in secondary education—Technical instruction acts, 1887, 1889, 1891—Local customs and excise act, 1890—Welsh intermediate education act, 1889—Files of the “Record of Technical and Secondary Education”—Reports of the Science and Art Department—School reports of London, Liverpool, Birmingham—Files of the “Educational Times” and “School Guardian.”*

TOPICAL OUTLINE.—*Scotland: Public supervision of secondary schools, operations in 1890-91—Provision for technical instruction. Wales: Scope of intermediate education act of 1889, action in respect thereto—Existing secondary schools. England: Conditions under which secondary and technical instruction are maintained—Lack of statistics—Reorganization of endowed schools under the Endowed Schools Commission and the Charity Commissioners—Importance of scholarship funds—Recent measures promoting technical instruction—Work of the Science and Art Department—Proposed legislation relative to secondary education.*

MOVEMENTS IN SCOTLAND.

Measures looking to the organization of the agencies for secondary instruction and to adequate provision for technical instruction have recently assumed great importance throughout the British isles. Scotland has taken the lead in this respect, the inspection of secondary schools having been undertaken by the Scotch education department in 1886. The number of such schools now under inspection is 55, of which 23 are known as higher class public schools (receive appropriations from local taxes), 22 are endowed schools, and 10 are private schools whose managers have requested the inspection of the department. Steady improvement is noted in the schools whose work has been inspected in successive years. The “leaving certificate examination,” which was established in 1888, is found to have a stimulating influence. The number of schools participating in this rose from 29 in 1888 to 50 in 1890, and the number of candidates from 972 to 3,120. Still further increase was noted in 1891, when the higher departments of the state-aided (elementary) schools were allowed to avail themselves of the examination. The number of higher class schools represented in the examination rose that year to 52, while the number of departments of state-aided schools was 63. The number of candidates was 5,500.

¹By A. Tolman Smith.

The following tables show the particulars of the examination:

	Total number pre- sented.	Passed in different grades.			Total. passed.
		Lower.	Higher.	Honors.	
English	3, 099	1, 516	458	79	2, 053
Latin	1, 233	541	264	29	834
Greek	690	253	110	11	374
French	1, 933	924	243	78	1, 245
German	1, 249	752	161	42	955
Italian	4	.....	4	.....	4
Mathematics (including arithmetic)	1, 925	732	152	40	924
Arithmetic only	2, 514	1, 448	131	.....	1, 579

	Total number pre- sented.	Passed.	Passed with distinction.	Total passed.
Geometrical conics	97	52	14	66
Analytical geometry	78	36	17	53
Dynamics	295	106	53	159
Bookkeeping and commercial arithmetic	278	.....	.....	147

	1888.	1889.	1890.	1891.	1892.
Number of candidates	972	2, 066	2, 528	3, 120	5, 175
Number of schools	29	41	43	50	115
Number of papers taken	4, 300	9, 200	11, 300	13, 192	18, 691

A large number of university and professional authorities have announced their readiness to accept the "leaving certificate" in lieu of preliminary examinations held under their own direction.

The series of measures looking to public supervision and support for secondary schools is completed by the bill providing for the transfer to the Scotch education department of the sum of £60,000 (about \$300,000) from the local taxation (Scotland) account in aid of the cost of secondary education.¹

Scotland was also the first division of Great Britain to secure a special law for technical instruction (1887). This law has, however, proved to be defective in many respects and additional legislation is confidently anticipated.² Meanwhile the funds which the county councils have allowed for technical instruction³ have given an impetus to practical operations.

¹ The bill became law June 27, 1892. It provides also for the appropriation of £30,000 (in round numbers \$150,000) to the universities of Scotland.

² The new Scotch technical act has been introduced at the present session of Parliament (1892).

³ Under the local taxation (customs and excise) act, 1890. By this act a surplus derived from the duties on liquors was placed at the disposal of the county councils with the privilege of applying the same to technical education.

The following is found to be the disposition of the funds by the councils up to October, 1891, so far as reported:

	In counties.			In burghs.		
	Number.	Aggregate grants.			Number.	Aggregate grants.
		£	s.	d.		£ s. d.
Councils giving all to technical education	11	8,976	13	10	5	576 2 3
Councils giving part to technical education and part to relief of rates.....	2	a 212	3	7	7	a 4,161 10 0
Councils considering the question of its allocation	6	b 519	13	2	10	b 3,636 2 0
Council which has given part to relief of rates, the remainder being under consideration		6,624	0	6		6,005 12 7
Councils giving all to relief of rates	8				1	b 547 2 2
Councils from which no information has been received	6	3,035	8	2	54	c 526 10 8
						4,543 4 4
					96	

a To technical education.

b To rates.

c Under consideration.

In all an aggregate sum of £39,364 9s. 4d. (\$191,311.27) is above accounted for, which, deducted from the whole grant paid to Scotland, £48,051 (\$233,527.86), leaves a balance of £8,686 10s. 8d. (\$42,216.59) at the disposal of 6 counties and 96 burghs, from which no information has been returned.¹

The funds appropriated have been applied to the maintenance of special teachers of agriculture, dairy work, cookery, etc., in public schools, to the instruction of teachers in technical branches, and to the fostering of technical and art classes in secondary schools.

MOVEMENTS IN WALES.

The Welsh intermediate education act of 1889 is the outcome of recommendations made by a committee appointed in 1880 to inquire into intermediate and higher education and to make recommendations. The act is intended to increase the facilities for both secondary and technical instruction, and taken in connection with the elementary schools completes for the principality an educational system extending from the infant school to the university.

The new law provides for an official inspection of secondary schools and a government grant in aid of such schools not to exceed in any county the amount contributed out of the county rate (or tax) for the same purpose. These appropriations with fees and endowments make up the income of the schools. The law also authorizes the governing body of a secondary school to borrow money from the public works loan commissioners for the erection or enlargement of school buildings.

Intermediate education as defined by the act "includes instruction in reading, writing, and arithmetic, Latin, Greek, the Welsh and English languages and literature, modern languages, mathematics, natural and applied science, or in some such studies, and generally in the higher branches of knowledge. 'Technical education' includes instruction in (1) any of the branches of science and art with respect

¹ See Record of Technical and Secondary Education, No. 2, 1892, pp. 166-167.

to which grants are, for the time being, made by the department of science and art; (2) the use of tools and modeling in clay, wood, or other material; (3) commercial arithmetic, commercial geography, book-keeping, and shorthand; and (4) any other subject applicable to the purposes of agriculture, industries, trade, or commerce which may be specified in a scheme, or proposals for a scheme, of a joint education committee, as a form of instruction suited to the needs of the district; but it shall not include teaching the practice of any trade or industry or employment. In schools established under the provisions of this act, no religious catechism or religious formulary which is distinctive of any particular denomination may be taught to a scholar attending as a day scholar at the school established or regulated by the scheme, and the time for prayer or religious worship or for any lesson or series of lessons on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal conveniently of a day scholar therefrom."

The county councils, created by the local government act of 1888, constitute the machinery for the administration of the act for the space of three years, after which the duties will devolve upon the charity commissioners; but the several educational associations of Wales, notably the North Wales Scholarship Association, the Joint Education Committees of Wales and Monmouthshire, and the Association for Promoting the Education of Girls in Wales, are actively at work to give effect to the law of 1889. Their efforts are directed to raising money for scholarship funds for the benefit of pupils in elementary schools and to securing the proper distribution and organization of the resources for secondary education. The distinct recognition given by the act to technical instruction is part of the general impulse which this subject has received throughout Great Britain. With respect to the present provision for intermediate education in Wales the committee of 1880 say in their report:

The number of endowed schools at present conducted as grammar schools in Wales and Monmouthshire is 27, of which 13 are in North Wales, 11 in South Wales, and 3 in Monmouthshire. There are also a few schools which, though by foundation grammar schools, have from deficiency of funds or other causes either fallen into abeyance or into the condition of merely elementary schools.

* * * * *

As nearly as we have been able to estimate, the aggregate endowments of existing grammar schools amount to about £12,788 (\$62,150), of which North Wales has £4,352 (\$21,151), South Wales £4,665 (\$22,672), and Monmouthshire £3,771 (\$18,327). The provision made by the above endowments is at present available for the education of boys only. For the education of girls there are but three endowed schools in the whole principality, viz: Those at Denbigh and Llandaff, supported out of the funds of Howell's charity, the gross income of which amounts to £6,500 (\$31,590), and the school at Dolgelly, created by a scheme under the endowed schools acts, and maintained with funds provided out of the charity of Dr. Daniel Williams, and amounting to about £300 (\$1,458) a year.¹

¹Quoted from *Studies in Secondary Education*, p. 113.

MOVEMENTS IN ENGLAND.

For an understanding of recent movements in England, it is necessary to have in mind the various conditions under which secondary and technical instruction are there maintained. In general it may be said that secondary instruction is the work of private corporations and individuals, although three classes of public bodies have some responsibility in the matter. These are (1) the Charity Commissioners for England and Wales; (2) local school boards; (3) the Science and Art Department.

No general statistics of secondary schools have been published since 1868, when the report of the British Schools Inquiry Commission was issued. This commission was appointed to investigate the operations of the endowed schools of the country, not including the nine great public schools.

The report divides the secondary schools into three classes, endowed, proprietary (belonging to a number of stockholders called proprietors), and private. To these classes may now be added the higher board schools.¹ The commissioners reported in 1868 that 3,000 schools, of which a large proportion were elementary, were benefiting by endowments. The grammar schools coming within the scope of their inquiry numbered 782 and were educating about 37,000 boys. The 9 public schools had at the same time 2,956 on their registers, or altogether 40,000 boys in endowed schools, out of an estimated total of 255,000 requiring secondary education. The need of fuller provisions for secondary education was emphasized by the commissioners. The immediate outcome of their recommendations was the endowed schools act of 1869, amended in 1873 and 1874. This law was intended to provide "more efficacious means for reforming the statutes of endowed schools and the application of their endowments;" for its execution an "endowed schools commission" was created with authority to draft new statutes governing the endowments. At the end of three and a half years, the original limit of its duration, the powers of the commission were prolonged for a year and then (1874) were transferred to the charity commission, which becomes thus an organizing authority in the work of secondary instruction. The original law applied to many foundations for elementary education, but in 1873 these were passed to the jurisdiction of the Education Department unless their endowments yielded a revenue exceeding £100 per annum.

From a return relating to schemes² passed before 1880, that is, dur-

¹ P. 133.

² The benefits resulting from the revision of individual endowments may be illustrated by the changes effected in two cases:

In 1552 a free grammar school was founded at Birmingham by King Edward VI, who granted for the purpose certain lands held by the Guild of the Holy Cross. The commission of 1868 found the school at a low ebb, numbering only 115 boys, and with buildings in a ruined condition. The foundation has been twice reorganized under

ing the first ten years of the working of the act, it appears that 246 schools for boys and 40 schools for girls had been dealt with. Between 1868 and 1883 the number of pupils in schools from which information had been received had increased from 13,851 to 27,912. Of this increase 10,075 pupils were in new schools opened during the period. These facts point to advantages arising from a supervisory authority extraneous to the school.

The charity commission, in their reports, urge particularly the application of a part of the income from endowments to the creation of scholarships for pupils of the elementary schools. In the absence of public high schools, such as exist in this country, that is indeed the only means by which the poor can obtain secondary instruction.¹

the new law and now comprises two high schools, one for boys and one for girls, and seven affiliated grammar schools, linked on the one hand to elementary schools and on the other to the two high schools and to Mason's College, by a large number of scholarships. These schools afford accommodation for 2,315 pupils (1,350 boys, 965 girls). One-third of the whole number are admitted on foundation scholarships, one-half of which are given to pupils who have attended public elementary schools in Birmingham two years. (See *Studies in Secondary Education*, Part III, Chap. IV.)

The famous Christ's Hospital (Blue Coat School *a*), London, was also founded by Edward VI (1553) and has been enriched by numerous gifts and bequests down to the present time. The objects of the trust were the relief of the needy and the education of poor children. At the date of the report of the schools' inquiry commission, two schools were maintained, *i. e.* a large boarding school in the heart of London, and a preparation school at Hertford. The two schools had at that time about 1,200 boys, annually under their charge. The gross income was about £56,000, of which £48,000 (\$240,000) were applied to education. As reorganized by the charity commission, the revenues will hereafter support five schools, *i. e.* (1) a boarding school for 700 boys, or for 850 when sufficient funds are available; (2) a boarding school for 350 girls in separate boarding houses of suitable size; (3) a preparatory school for 120 boys; (4) a day school for 600 boys, to be named the science school, which is to include a chemical laboratory, and be fitted with workshops and appliances for working in wood and metal, situate in the county of Middlesex, at a distance of not more than 3 miles from the Royal Exchange; and (5) a girls' day school for 400 scholars. (See *Rep. of Brit. Schools Inquiry Commission*, Vol. I, Chap. V, also Vol. X, and *Parliamentary Paper* (79), session 1890.)

¹ The following particulars relative to scholarships are cited from "*Studies in Secondary Education*," and from city reports:

"In 1882, there were 2,989 scholarships held in secondary schools under schemes developed by the commission. Of these, 1,145 were restricted to bona fide pupils of elementary schools. There were, at the same time, 250 exhibitions; that is, sums of money to carry a boy from a secondary school to one of higher grade, or to a college or university. The number of funds of both classes has been increased since the year specified. In the cities, especially, these scholarships or endowments are supplemented by donations and by annual subscriptions for the same purpose."

"In London, there are between 600 and 700 scholarships in secondary schools available for boys from elementary schools, and varying in value from the mere remission of fees to \$100 a year, or more."

*a*Camden, Stillingfleet, Richardson, Coleridge, Charles Lamb, and Leigh Hunt were all pupils here. See article in *School Guardian*, August 2, 1890, p. 575.

The two classes of secondary schools supported entirely by private funds, *i. e.*, proprietary and private, are conducted in much the same manner as are stock-company and private schools in our own country, and like these are of varying degrees of excellence. The most notable company for the maintenance of schools is the Girls' Public Day School Company, established in London in 1872, and now maintaining about thirty-five schools located in the chief cities. A recent estimate gives 600,000 as the number of pupils under instruction in the private schools.¹

The only general agencies affecting these schools are the systems of examinations for schools maintained by universities and by the college of preceptors, and the science and art department examinations.

As a rule, the endowed schools and private schools are classical, although many of them maintain also a science or modern side. The higher board schools, although nominally elementary schools, are really doing the work of secondary instruction. They incline chiefly to scientific studies, a tendency stimulated by the action of the science and art department, which offers grants for pupils beyond the sixth grade in elementary schools who pass specified examinations in science.² The policy of this department is one of the causes of the close relation between secondary and technical instruction that has been made in recent discussions and measures. The work of the department will be best appreciated after reference to the most important of these measures.

In 1889 England secured a technical education law³ (applicable also to Ireland), which is simply permissive, allowing local authorities to

"The London school board controls, in addition, between 50 and 60 scholarships annually, of which a portion are open to girls, also."

"The Liverpool council of education offer 12 scholarships annually, valued at £20 each, and running for three years, to enable boys in the elementary schools to go to the Liverpool College, or to the Liverpool Institute."

"The Birmingham school board, as the trustees of certain scholarship endowments, offer a few minor scholarships of £5 (\$25) each towards the maintenance of boys who have already obtained foundation scholarships at one of the King Edward's schools, and also scholarships of £15 to £25, running each for four or five years, enabling a boy to pass through."

¹ Inaugural address of Rev. Dr. Walker, president-elect for 1893 of the Association of Private Schoolmasters. (*Educational Times*, February, 1893, p. 6.) A more recent estimate by Mr. J. J. Findlay gives 800,000 as the number of pupils in secondary schools or pursuing secondary studies, including 25,000 instructed at home or on the continent, and excluding the 90,000 pupils of higher board schools. It should be observed that the elementary departments of secondary schools are included in the above total. (See *Educational Times*, June 1, 1893, pp. 254-256.)

² The regulations are the same for Scotland.

³ Amended in some important particulars by a law of 1891.

levy a penny rate for the purposes specified therein. The provisions of the local taxation (customs and excise) act of the year following, which applied alike to England and Wales and to Scotland, gave a substantial basis for the new departure by authorizing the county councils to employ the funds placed at their disposal for the benefit of technical schools, classes, etc.

As to the action taken with respect to the application of the funds, a return made to the House of Lords, and covering the year ended March 31, 1891, shows the following for the 109 counties and county boroughs in England (Monmouth county not included):

In seventy-eight cases wholly to technical education (including science and art); in twenty-seven cases, partly to those purposes; in four cases wholly in aid of rates (local taxes).

Fifteen Welsh counties and county boroughs, and Monmouth, decided to apply their shares of the duties in the following manner:

In twelve cases wholly to intermediate education, or intermediate and technical education combined; in one case partly to intermediate and technical education; in one case partly to intermediate education; in one case partly to technical education.

The total amount paid to the councils out of the residue of the duties in respect of the year amounted to £740,376 8s. 3d., which sum was applied as follows:

	£	s.	d.
To technical education, including science and art and intermediate education	496,569	15	10
In aid of rates	236,242	18	10
Unappropriated.....	7,563	13	7
Total.....	740,376	8	3 (\$3, 598, 230)

WORK OF THE SCIENCE AND ART DEPARTMENT.

Reference has already been made to the grants allowed by the science and art department. They comprise:

(a) Grants for children of the industrial classes, who take science or drawing at school and pass the science and art examination.

(b) Grants to students who have passed the stage of elementary instruction, and who study in special science and art schools under inspection by the department.

(c) Grants of scholarships and prizes to enable promising students to proceed with their studies.

(d) Grants for apparatus, laboratories, and museums, etc.

(e) Maintenance at London of training schools for teachers, *i. e.*, the Normal School of Science and the National Art Training School:

With the exception of grants for drawing and manual training, the work thus fostered lies beyond the elementary school grade, and is properly classified either as secondary or technical. Drawing has been made obligatory for boys in public elementary schools, a recognition of

its universal importance for the industrial classes. Manual training was added to the subjects encouraged by the science and art department, in 1890, a few school boards having already made experiments in that branch.¹

The extent and growth of the operations of the science and art department outside of the art work in elementary schools are indicated by the following table and citations from the thirty-ninth official report:

SCIENCE SCHOOLS, CLASSES, ETC.

Year.	Schools.	Classes.	Pupils under instruction.	Year.	Schools.	Classes.	Pupils under instruction.
1882.....	1,402	4,881	68,581	1887.....	1,684	6,300	103,088
1883.....	1,421	5,281	72,054	1888.....	1,952	6,579	112,808
1884.....	1,463	5,001	78,336	1889.....	2,195	7,475	131,313
1885.....	1,542	5,649	78,810	1890.....	2,063	7,756	133,821
1886.....	1,682	5,862	94,838	1891.....	2,164	8,568	148,408

The decrease in the number of schools since 1889 is due to the closing of merely ephemeral institutions.

Of the schools examined in 1891, 1,614 were in England and Wales, 324 in Scotland, and 226 in Ireland. The number of students who came up for examination from them was 90,812, an increase of 7,742 on the previous year. Besides these, 2,817 self-taught students and pupils from classes not entitled to claim payments on results presented themselves for examination. The number of examination papers worked by the 93,659 students who were examined was 179,549, or an average of

¹ The instruction must be (a) in the use of the ordinary tools used in handicrafts in wood or iron, (b) given out of school hours in a properly fitted workshop, and (c) connected with the instruction in drawing; that is to say, the work must be from drawings to scale previously made by the students.

The instruction may be given by one of the regular teachers of the school if he is sufficiently qualified; if not, he must be assisted by a skilled artisan.

The work of the class will be examined by the local inspector of the department, accompanied, if necessary, by an artisan expert on the occasion of his visit to examine in drawing.

If it appears that the school is properly provided with plant for instruction and that the teaching is fairly good a grant of 6s., or, if excellent, of 7s., will be made for every scholar instructed, provided (a) that he has passed the fourth standard; (b) that he has received manual instruction for at least two hours a week for twenty-two weeks during the school year; (c) that a special register of attendance is kept; and (d) that each scholar on whom payment is claimed is a scholar of the day school and has attended with reasonable regularity. The grant may be reduced or wholly withheld at the discretion of the department if it appears that the plant is insufficient or that the instruction is not good. (Official circular, 1890.)

From the official report it appears that "during the year ending August 31, 1891, 6,212 elementary schools with 1,170,340 scholars were taught drawing and examined under the regulations of the department. Seven hundred and thirty-nine of these schools were in Scotland and 51 in Ireland. This was an increase of 1,886 schools and 241,983 scholars, or 44 per cent and 26 per cent, respectively, as compared with the numbers in 1889-90, when 4,324 schools, with 928,357 scholars, were examined."

Classes of manual instruction have been established in 245 schools, 63 of which were examined in the year ended August 31, 1891, and earned grants amounting to £600 13s. 4d. on account of 2,568 schools.

very nearly two papers per student. Seventy-two thousand four hundred and sixty-three students were successful in passing in one or more subjects, and of these 37,333 were successful for the first time. In the previous year 71,417 were successful, and 37,614 for the first time.

The Royal College of Science, London, with which is incorporated the Royal School of Mines, numbered 285 students; of these 121 were Government students, royal exhibitors, national scholars, local exhibitors, free students, and teachers in training, and 164 were private students paying fees.

At the Royal College of Science, Dublin, there were 116 students, as against 103 in the previous year.

Art instruction in local schools of art and art classes.—The number of art schools and classes examined in 1891 was 1,313, as against 1,182 in 1890, showing an increase of 131. The number of students under instruction was 88,833 in 1890, as compared with 100,031 in 1891.

The National Art Training School registered 191 students. Altogether there were 249,031 students pursuing art and science studies under the auspices of the department.

Expenditure.—The expenditure of the department during the financial year 1891-92 amounted to £530,607 (\$2,578,751), which was apportioned as follows: Expenses of administration, including central staff, office expenses, etc., £33,034; direct payments, prizes, etc., to encourage instruction in science, £113,434; direct payments, prizes, etc., to encourage instruction in art, £52,120; services common to both science and art instruction, £61,034; institutions supported or aided by the state through the Department of Science and Art, £58,000; the South Kensington and Bethnal Green Museums, including the expenses of circulation of science and art objects to country institutions, £85,940; payments for instruction in public elementary schools and training colleges in drawing, £123,167, and grants in aid of technical instruction and local museums, £3,878.

It will be seen that the entire expenditure of the department is less than the annual amount at the disposal of the county councils (\$3,590,000), and in view of these new resources the department announces the withdrawal after May, 1892, of grants for the second (*i. e.*, lowest) class in the elementary stage of each science subject, of grants in aid of technical subjects, and also of grants for apparatus and fittings during the continuance of the customs and excise act, excepting in Ireland, which has no share in this fund. At the same time the department will increase its appropriations for advanced science instruction.

The sum at the disposal of the county councils may be regarded as a fund for the development of secondary education, as by the law of 1889 the councils are debarred from making direct appropriation for instruction given to boys and girls in the elementary grades.

Taking advantage of this fact, the National Association for the Promotion of Technical and Secondary Education urges—

That in the opinion of this association the powers conferred on local authorities by the technical instruction acts, 1889 and 1891, and the local taxation (customs and excise duties) act, 1890, ought to be so extended by legislation as to enable them to deal effectively with the organization of secondary education.

In pursuance of that opinion, a secondary education bill will undoubtedly be introduced at the next session of Parliament.¹

It was not the purpose of this chapter to consider curricula and the internal conduct of secondary schools. As, however, this grade of instruction is just now a subject of much discussion among us, the work of individual schools in England would presumably furnish interesting suggestions. For this reason extracts from the prospectuses of three typical schools, showing admission requirements and courses of study are appended to this article.

CITATIONS FROM PROSPECTUSES OF ENGLISH SECONDARY SCHOOLS.

HARROW, ONE OF THE NINE GREAT PUBLIC SCHOOLS—ADMISSION REQUIREMENTS AND CURRICULUM.

No boy can be admitted into the school before completing his twelfth, nor (except under certain conditions) after completing his fourteenth year, nor (in any case) without a certificate of good conduct from the master or tutor under whom he has been previously educated.

Every boy, before his admission to the school, is required to pass an entrance examination.

For the classical side the obligatory subjects are easy translation from Xenophon, Cæsar, Ovid, or for more advanced boys from Homer, Euripides, Virgil, Cicero, and Greek and Latin grammar.

A simple paper is also given to test a boy's general knowledge of English subjects, *i. e.*, Scripture, English grammar, and the elements of geography and English history (but a boy is not required to do all the parts of the paper), arithmetic through fractions and interest.

French, algebra, geometry, natural science may be taken, and knowledge of these is reckoned in the candidate's favor.

For admission to the modern side the principal subjects are mathematics, Latin, and French; a boy is required to pass in all three. Any knowledge of German or history is taken into consideration in determining a boy's place. The mathematical part of the examination comprises arithmetic, algebra, so far as to include quadratic equations, and the earlier parts of Euclid or some other elementary geometry.

No boy can remain in the school (without special permission) after he is 16, unless he has reached the *shell*; after 17, unless he has reached the sixth form, or in any (ordinary) case after 19.

The following scheme shows the distribution of subjects and hours each week for two forms in each division. In the classical side the forms selected are the highest (*i. e.*, upper sixth) and the third (*i. e.*, IV, I); between the two there are nine forms. On the modern side the forms selected are the highest (*i. e.*, modern sixth) and the second (modern IV, I). Between these there are seven forms.

¹ The bill has just been introduced by Mr. Arthur Acland, June 1, 1892.

CLASSICAL SIDE.

Form.	Divinity.	Latin.	Greek.	History.	English.	Mathematics (taught in divisions).	Natural science. ¹	Modern languages.	No. in form.	Av. age.	
										Years.	Months.
VI, I,	2 hours, an Epistle of St. Paul; repetition.	7 to 8 hours, all boys; 2 to 3 hours more, some boys; Cicero in In Verrem, Actis I; Virgil, Æneid VIII; also one or two comp. exercises.	7 to 8 hours, all boys; 2 to 3 hours more, some boys; (Edipus, Tyranus; Thucydides, Book III; Aristophanes, Knight's; some boys; Pin-dar; Olym. Odes; also one 1 or 2 comp. exercises.	1 hour, all boys: Smith's Greece, B. C. 401-321. Some boys, 2 hours more: English History.	2 hours, some boys; also all boys an essay once a month.	2½ hours, all boys; ½, some boys.	2 to 3 hours or more, some boys.	2 to 4 hours, some boys.	36	13	
IV, I,	Old Testament 1 hour, Gen. XII to end; New Testament 1 hour, Acts I to XIV; repetition.	6½ hours. Translation. Hardy's Reader, pp. 23 to 38, 3 hours; Ovid, 1 hour (Taylor's selections, 200 lines); prose 2 hours, easy continuous passages, short sentences; grammar ½ hour; accent and elements of syntax.	3½ hours: Translation 3 hours; Col-ton's Reader, pp. 53 to 69; grammar ½ hour. Accidence.	2 hours: English History, Gardiner's 'Students' History, 1189 to 1272; Gardiner's Outlines, 1603-1760; Roman History, B. C. 367-264.	Geography ½ hour: Baker's British Empire, South Africa, and British North America; repetition maps, Grammar ¾ hour; Structure of sentences. Repetition.	3½ hours, all boys; ½ non-Greek boys.	.....	2½ hours all boys; ¾ non-Greek boys.	34	14	8

¹ Natural science is begun in the sixth [from the lowest] form (Shell I).

MODERN SIDE.

Form.	Divinity.	Latin.	French.	German (taught in divisions). ¹	History.	English.	Mathematics (taught in divisions).	Natural science. ²	No. in form.	Av. age.	
										Years.	Months.
M, VI,...	2 hours: selections from the Psalms; Acts vi, vii, viii, ix; repetition.	4 hours: Virgil, Eclogue and part of Georgic IV; Lucrætiûs, part of Book I, Latin prose. [Also 1 or 2 hours with tutor.]	3 to 4 hours: Sainte-Beuve, Causeries du Lundi, 3 chapters; Pierre Loti, Pêcheur d'Islande, Prose composition.	3 to 4 hours: part of Goethe's Egmont. Prose composition.	1 to 2 hours: English History, 1189-1307. European History.	1 hour: Shakespeare, Richard III, Twelfth Night; Macaulay's Essay on the Spanish Succession. Composition.	6, or in some cases 8½ hours.	Chemistry or physics. Taught as a special subject to some boys only; 2, or in some cases 4 or 5 hours. One lesson in geology to all.	14	17	8
M, IV, I.	2½ hours: Old Testament (Eng.), Genesis, Exodus, Numbers, Deuteronomy, Joshua, Judges, Samuel, Kings, Isaiah, Jeremiah, Lamentations, Ezekiel, Daniel, Malachi, Acts vi, vii, viii, ix; repetition.	3½ hours: Epitome Historiæ Græcæ, chapters 61 to 82. Ovid, selections. [Also 1 hour with tutor.]	5½ hours: Le Duc de Reichstadt, 40 pages. Grammar. Daseen translation. Exercise. Prose in divisions.	.....	2 hours: English History, 1 hour, 1189-1307. Greek or Roman History, 1 hour. B. C. 120-40. Gardiner's Outlines. [Some boys 1 or 2 hours more with tutor.]	1½ hours: Longfellow's Evangeline. Repetition and map.	Same.....	Same.....	15	14	10

¹ German is begun in the third [from the lowest] form (*i. e.*, modern shell III).² Natural science is begun in the third [from the lowest] form (*i. e.*, modern shell III).

The City of London School was established by the corporation of London, under the authority of an act of Parliament procured by them for the purpose in the year 1834, and was erected at their expense on the site of ground formerly occupied by Honey-lane Market, Cheapside, and removed thence to the Victoria Embankment in 1883. It is endowed with an annual sum toward its maintenance, derived from certain estates left in 1442 by John Carpenter, town clerk of the city, and is under the government of the corporation and a committee chosen by them.

The object of the school is to furnish a liberal and useful education for the sons of respectable persons who are engaged in professional, commercial, or trading pursuits, without the necessity of removing them from the care and control of their parents. Boys are admissible at any age between 7 and 15 years, and may remain until 19. The minimum qualification for admission is a knowledge of the first four rules of arithmetic, and ability to read and write. The mode of admission is by an application according to a form obtained of the secretary, which is required to be signed by the parent or guardian, and also by some member of the corporation, either alderman or common councilman. The charge for each pupil is £12 12s. a year, payable £4 4s. each term in advance up to the age of 12, and after that age £15 15s. a year, payable £5 5s. each term in advance. Printed books and drawing materials are furnished as required, and are charged for at reduced prices in each term account. A charge of 2s. 6d. a term, payable not to the secretary but to the class master, entitles the subscriber to the use of the bats, balls, etc., in the play ground, as well as to a copy of each number of the School Magazine, besides constituting him a member of the various school clubs. This subscription, though not compulsory, has the sanction and approval of the governing body of the school, and is strongly recommended by the head master.

The course of instruction includes the English, Latin, Greek, French, German, Spanish, and Italian languages; mathematics, arithmetic, writing, book-keeping, geography, history, shorthand, chemistry and natural philosophy, elocution, vocal music, drilling, and gymnastics. The school is divided into two sections, the senior and the junior. The senior section is divided into classical and modern language sides. Before boys leave the junior section their parents are consulted as to the side in the senior section on which they are to be placed. On the classical side boys are prepared for the universities, the London University matriculation examination, and the learned professions. Boys on the modern side are taught subjects specially suitable as a preparation for mercantile pursuits. Facilities are given to boys who wish to pass the examinations of the civil-service commission, and of the Pharmaceutical Society, the preliminary law and medical examinations, and the examinations for commercial certificates.

In addition to the ordinary classical and modern sides there is a natural science division, into which boys may be admitted who have attained a certain standard in literary and mathematical education.

The curriculum of the natural science division includes the following subjects:

- (1) Divinity, 1 hour per week.
- (2) English and French, 4 hours per week.
- (3) Arithmetic and mathematics, 6 hours per week.
- (4) Chemistry, 6 hours per week.
- (5) Physics, 6 hours per week.

Provision is made for boys whose parents wish them to continue, as far as may be consistent with their main studies, German, Latin, or Greek. The object of this division is to meet the needs—

- (1) Of boys for whom their parents desire a training in natural science in preference to a training in languages, either classical or modern.

(2) Of boys who are intended for engineering pursuits.

(3) Of boys who have passed the London University matriculation examination, and desire to pass the preliminary scientific examination, or the first B. Sc.

(4) Of boys who aim at science scholarships at Oxford or Cambridge.

The school is provided with a carpenter's shop, for admission to which there is no extra charge; but boys pay for their tools, full sets of which may be obtained through the school.

Drawing is the only extra. The fee for drawing is 7s. a term, if a boy attends the drawing classes on Wednesdays only or on Saturdays only; 14s. a term if he attends on both days. The Scriptures are read and taught in the school, and the business of each day commences and terminates with prayer.

The hours of attendance are from 9 to a quarter past 3, allowing an interval of three-quarters of an hour, from 12 to 12:45, for refreshment. Pupils can be accommodated either with dinner at 1s. a head, or with a cold luncheon at 6d. a head, at a table provided by the caterer. Parents are advised to purchase dinner or luncheon tickets, which are supplied by the caterer in books. There are optional classes on Wednesday afternoons and on Saturday mornings, and on whole school days from 3:15 to 4:15, when additional instruction (without extra fee) is given in some of the ordinary subjects of school work and in a few subjects not taught during the regular school hours.

A vacation of six weeks is allowed in the summer, three weeks at Christmas, and three weeks at Easter; the other holidays, besides Saturdays and the afternoons of Wednesdays, are Easter Monday, Whit Monday, and Lord Mayor's Day.

The school year is divided into three terms, the first extending from about the middle of January to the middle of April, the second from the beginning of May to the latter end of July, the third from the second Tuesday in September to Christmas.

THE EDUCATIONAL COURSE OF CLIFTON COLLEGE (A PROPRIETARY SCHOOL).

The school consists of the following parts:

(1) The upper school, for boys between 13 and 19, which is divided into three departments—the classical side, the modern side, and the military side.

(2) The junior school, for boys between 10 and 14, which prepares for the three departments of the college.

(3) The preparatory school, for boys between 7 and 11, which prepares for the junior school.

The numbers of each part of the school are limited—the upper school to 460, the junior school to 140, the preparatory school to 45.

Preparatory school.—In the preparatory school boys receive a thorough grounding in English subjects, French, Latin, and arithmetic. Their play is systematic, and is superintended by the masters. Their schoolrooms are in a separate building, at some distance from the college.

Junior school.—The junior school have separate buildings within the college precincts, and a separate part of the playground. Their hours are so arranged that they can not have communication with the older boys. They all learn English subjects, French, Latin, and mathematics. In the third forms Greek is taught to those who are being prepared for the classical side of the college, while boys intended for the modern and military sides learn extra French and mathematics. The games are carefully organized, as well for town boys as for boarders, and are superintended by masters.

Upper school.—On entering the upper school a boy has to choose between the classical and the modern side. (Boys intended for the military side remain on the modern side until they reach the upper fourth form.) A boy who is intended for the university or the Indian civil service should join the classical side, unless he is to

specialize in mathematics or science. Those who are intended for business generally join the modern side. Where the profession is not yet decided it is generally better to join the classical side.

Every boy is placed in a "form." On the classical side the form work comprises Scripture, Latin, Greek, history, geography, and English literature, and occupies about twenty hours in school each week, besides preparation. On the modern side the form work comprises the same subjects, with the exception of Greek, and occupies about ten hours in school. The rest of the work, on both sides alike, is done in "sets," *i. e.*, groups of boys chosen from different "forms" according to their capacity in each special subject. The mathematical sets throughout the school, and the German and science sets in the upper half, are common to the two sides of the school.

The separate work of the two sides is as follows:

Classical side.—In the third and fourth forms, all boys learn French and science in sets. In the fifth forms, French is a voluntary subject, and each boy has to choose between German and science. The form work becomes somewhat elastic, so that boys are able, to some extent, to cultivate special tastes, especially a taste for history.

Modern side.—In the third forms all boys learn French, drawing, and natural science in sets. In the fourth forms drawing ceases to be compulsory, and German is begun, while French and science are carried further. From the upper fourth a large number of boys pass into the military side. Those who are not intended for the army pass up into the modern fifth forms, where considerable facilities are given for special work. In those forms all boys do English, Scripture, history, French, and drawing, and they may choose any two of the three subjects, Latin, German, and science. Those who are strong in mathematics, science, or modern languages are able to devote a large amount of time to any one of the three. Those who are going to the universities now join a special Greek class, in which they learn the small amount of that language which is required in order to pass at Cambridge.

Sixth form.—Boys are promoted from both classical and modern upper fifths into the sixth form. The whole form attend the head master's lessons in Scripture and English; but for other subjects they are divided into two main branches. In one of these are placed all boys whose special subject is classics; but they continue to give four hours a week to mathematics and four to either German or science until their last year. The other division comprises all those, whether promoted from the classical or the modern fifth, who are to devote themselves mainly to history, science, mathematics, or modern languages. These do a moderate amount of Greek and Latin as a form, doing their special work in sets.

The military side is open only to boys who reach the upper fourth form before they are 16, and are able to reach a certain standard in mathematics. The work of this side is carefully regulated to enable boys to pass direct from the school into Woolwich, Sandhurst, or Cooper's Hill (Indian Woods and Forests). As a rule, only boys preparing for those three examinations are admitted to the military side; but occasionally boys are allowed to enter it who are intended for the profession of civil engineering.

CHAPTER VI.

EDUCATIONAL SYSTEM OF IRELAND.¹

MATERIAL CONSULTED.—*Reports of the Commissioners of National Education in Ireland, 1834-'50, inclusive—Review and Compendium of the Minutes of Evidence taken before the Select Committee of the House of Lords, appointed February 17, 1854, to inquire into the practical working of the system of national education in Ireland—Reports of the Intermediate Education Board for Ireland, 1885-'91, inclusive—Reports of the Educational Endowments (Ireland) Commission—Reports of the Commissioners appointed to Inquire into the Operations of the Queen's Colleges in Ireland (1884)—The Book of Trinity College, Dublin, 1591–1891—“L'Enseignement Catholique en Irlande—Articles in the Revue du Monde Catholique, March 1 and December 1, 1891, and April 1, 1892—File of the London Times, 1891-'92.*

Ireland: area, 32,583 square miles; population (census of 1891), 4,704,750.

The principles controlling the policy of the British Government with respect to popular education, already referred to, *i. e.*, the sense of public responsibility in this matter and immemorial regard for local prerogative and private rights, have been displayed in a striking manner in the system of national education maintained in Ireland since 1831. The growth of the system has been phenomenal; the schools which in 1834–35² numbered 1,106, with an enrollment of 145,521, or 1.8 per cent of the population, having increased to 8,298 in 1890, with an average enrollment of 828,520 pupils, 17.6 per cent of the population. The ratio of average daily attendance to the population at the later date was 10 per cent, or more than five times the ratio of enrollment to population in 1835. The annual expenditure which in 1883 was estimated at £47,224 (\$229,509), and which it was supposed would ultimately reach a fixed sum of £200,000 (about \$1,000,000), was actually in 1890 £973,062 (\$4,729,082).

CONTROL AND SUPERVISION.

The Board of Commissioners.—The administration of the system is confided to a National Board of Commissioners appointed by the lord

¹ By A. Tolman Smith.

² Second report of the Commissioners of National Education in Ireland.

lieutenant of Ireland. The managers of schools, who are generally clergymen, come into immediate relation with this board. There are no elected school boards, as in England and Scotland, nor do local civil authorities appear in the matter at all.

Several details pertaining to the internal conduct of schools, which, in Great Britain, are left to local managers, are in Ireland entrusted to the board of commissioners (*i. e.*, the representatives of the Government). This policy grew out of the religious question which presented the greatest obstacle to the development of a national system of education in Ireland. At the time of the organization of the system it was necessary to allay the jealousies which had been excited by previous attempts to force Protestant schools upon a population overwhelmingly Catholic. To this end a formal declaration was made on the part of the Government that its purpose was "to superintend a system of education from which should be banished even the suspicion of proselytism, and which, admitting children of all religious persuasions, should not interfere with the peculiar tenets of any."¹

The sincerity of the Government with respect to this purpose was evidenced in the constitution of the board, which comprised eminent representatives of both Catholic and Protestant churches, and in placing under their control all matters affecting the subject of religious instruction. They were directed to separate literary and moral from religious instruction and to remit the latter subject to the clergy. All efforts to compel or to persuade the attendance of any child upon these exercises against the wishes of parents and guardians were strictly forbidden. The time allotted to secular instruction and the text books to be used either in secular or religious instruction were to be determined by the commissioners. They were also authorized to suspend or remove teachers and to fix the amount of their minimum salaries.² These provisions were not intended to interfere with the control of teachers by local managers, but simply as a means of guarding against the retention of teachers who should violate the rules of the board or who should be found incompetent, and to free them in some measure from dependence upon local managers. The number of commissioners, which began at seven, has increased to keep pace with the development of the system. By the charter of 1861 the board is incorporated with 20 members (10 Protestant and 10 Catholic); 17 were serving in 1890. The only paid member of the board is the resident commissioner, who is the virtual head of the system. Dublin is the official center.

The service of inspection.—For purposes of Government supervision

¹ Letter of Lord Stanley, chief secretary for Ireland, to His Grace the Duke of Leinster, lord lieutenant for Ireland, on the formation of a board of commissioners for education in Ireland, October, 1831.

² Letter of Lord Stanley. The original instructions have been modified from time to time, but the spirit of the instructions remains unchanged.

the country is divided into sixty districts, which are grouped in six divisions, each in charge of a head inspector. Under these are 29 district inspectors, 7 unassigned inspectors, and 10 inspectors' assistants. Inspectors and their assistants are appointed upon examination testing their scholastic and professional qualifications. Their salaries are graded in an ascending scale, which acts as a stimulus and reward for efficiency. The district inspectors are divided into two classes, of which the second begins at a salary of £275, which is increased to £305 by the addition of £10 biennially until the maximum is attained. The first class begins at £320 and increases to £370 by annual additions of £10. An allowance for traveling expenses is made to all inspectors. The duties of each class of inspectors are carefully defined. Head inspectors preside over and assist at the examination of teachers, determine their classification in conference with the district inspectors, conduct the examinations at the district model schools,¹ examine each year a sufficient number of the ordinary schools in their respective districts, conduct special inquiries ordered by the board, exercise a constant supervision over the district inspectors, and transmit an annual report to the board of commissioners. The district inspectors come into the most intimate relations with the schools. They are required to spend from four to five hours at least each day, exclusive of the time occupied in going to and returning from the schools, in the actual work of inspection. Every school must be visited at least once in each week of the three terms into which the school year is divided. These visits are made without announcement. The inspection must include details of organization and instruction, condition of buildings, school registers, etc.

Once each year a public examination must be held in each school, notice of which may be given beforehand. The district inspectors submit annual and term reports to the head inspectors, employing for this purpose official forms which secure uniformity.²

Local control.—The authority of the local managers is extensive and in most districts is reposed in one man, the priest, Presbyterian minister, or other clergyman, as the case may be.³ He appoints and dismisses the teachers, arranges the daily time-table of the school, and determines the character of the religious instruction. A report of January 31, 1891, shows that 48 per cent of school managers at that date were Roman Catholic clergymen; 30.5 per cent clergymen of the Episcopal church; 18.1 per cent Presbyterian ministers; 2.2 per cent Methodist ministers.

THE SCHOOLS.

How established.—Local managers must take the initiative in establishing ordinary national schools, providing the buildings and a por-

¹ See p. 151.

² Official instructions.

³ See Lord Stanley's letter.

tion of the fund for current expenditures.¹ The schools placed under the supervision of the commissioners were from the first called national schools, and it was ordered that this inscription should be put up conspicuously on the schoolhouses.

Classes of schools.—In 1840 the Presbyterian Synod of Ulster, which had previously opposed the national system, came into harmonious relations with the board, and vested and nonvested schools were thenceforth recognized. The former, to the building of which the state contributes, are vested in trustees for the purposes of national education.² The clergy of all denominations represented in vested schools have the right of going to the same and giving religious instruction under certain conditions and provisions.³

The nonvested schools receive aid only by way of salary and books, and the managers are not required to permit access to the clergy. The report of the board for 1890 showed 3,139 vested schools and 5,545 nonvested.

The commissioners have also direct control of a special class of schools called "model schools," for which they provide the buildings. These schools, which were contemplated in the earliest plans of the board, are intended, as their name indicates, to afford models of the best methods of instruction and organization and to serve as practice schools for students in training colleges, *i. e.*, normal schools.

It was proposed to establish one such school in each of the districts into which Ireland is divided for purposes of school inspection. In 1890 model schools were in operation in 26 out of 56 provincial districts, making, with 3 in Dublin, a total of 29. These schools resemble the graded schools of our own country, having in their complete stage a kindergarten department and separate departments for each of the six grades included in the scheme of study for national schools. In the number reported in 1890 there were comprised 84 separate departments. The enrollment was 9,567 pupils.

Convent and monastery schools are included also among those in

¹ The commissioners were directed to refuse all applications for aid in which the following objects were not locally provided for: (1) A fund sufficient for the annual repairs of the schoolhouse and furniture; (2) a permanent salary for the master not less than — pounds; (3) a sum sufficient to purchase books and school requisites at half price, and books of separate religious instruction at prime cost; (4) where aid is required from the commissioners for building a schoolhouse it is required that at least one-third of the estimated expense be subscribed, a site for building, to be approved of by the commissioners, be granted to them, and the schoolhouse when finished to be vested in them. (Lord Stanley's letter, p. 4.)

² The commissioners of national education award aid (*a*) towards the payment of the teachers and supply of books and other school requisites, (*b*) towards building schoolhouses and providing suitable fittings and furniture (this aid is given to vested schools only), (*c*) towards providing residences for teachers of national schools. See rules 247 to 249 (Rules and Regulations, 1887, p. 1).

³ Rules and regulations of Commissioners of National Education. Report 1843, pp. 237, 238.

relation with the board, the number of these in 1890 being 301, with an average attendance of 65,548 pupils. Naturally, the convent schools formed the great majority, *i. e.*, 267, with an average attendance of 60,885 pupils.

The year after the Irish poor-law came into operation (1840) the commissioners first note in their report the opening of workhouse schools and their coming under the supervision of the board. The number of this class of schools under the commissioners has steadily increased, being 158 in 1890, with 9,430 pupils. These, with 52 evening schools having an average nightly attendance of 1,747 pupils, complete the list of elementary schools under the commissioners.

Statistics, 1890.—To summarize, it appears that the number of schools borne on the commissioners' list December 31, 1890, was 8,298, an increase of 20 per cent since 1871. Returns from 8,262 of these schools show a total enrollment of 1,037,102, with an average enrollment of 828,520. Upon this number an average daily attendance of 489,144, or 59 per cent, was maintained. The classification of pupils by religious denomination is important as showing the progress of the system in overcoming sectarian opposition. Every teacher is accordingly expected to enter upon his register the church relation of each child. Of the schools whose returns were summarized, 3,866 were mixed schools, *i. e.*, attended by both Protestant and Roman Catholic pupils, and 4,394 were separate schools, *i. e.*, attended by Roman Catholic or by Protestant pupils exclusively.

Further analysis yields the following particulars:

Mixed schools.	Pupils.	Proportion.	
		Roman Catholic.	Protestant.
		<i>Per cent.</i>	<i>Per cent.</i>
Under Roman Catholic teachers exclusively	327,966	94.7	5.7
Under Protestant teachers exclusively	127,159	12.2	87.8
Under Roman Catholic and Protestant teachers conjointly	12,855	50.7	49.3
Total	467,980	70.8	29.2

Of the pupils in separate or unmixed schools, 468,222 were Roman Catholic and under teachers of that sect, and 100,733 Protestant under Protestant teachers. Two schools could not be classified under these heads. The percentage of schools exhibiting a mixed attendance declines steadily from year to year, having fallen from 55.1 in 1881 to 46.7 in 1890.

Sources of income for national schools.—The Government grant has heretofore furnished about $74\frac{1}{3}$ per cent of the annual income of the national schools. The balance has been derived from subscriptions and endowments, and, in poor-law unions,¹ contributions from the rates.

¹ Parishes and combinations of parishes, *i. e.*, unions, are districts for the administration of the poor law. In these, contributions from the rates for school purposes are made in behalf of the children of paupers.

In addition to these sources since 1890, a sum has been annually received from the surplus derived from the tax on beer and spirituous liquors (customs and excise act). The Irish educational bill now before Parliament provides for an annual appropriation in lieu of school fees for schools whose managers accept the conditions. This bill follows the precedent already established in Scotland and England, and will in all probability become a law.¹

The total income of the national schools for 1890-91 from all sources was £993,022 15s. (\$4,826,090), derived as follows:

Government.—Annual grant, £738,467 5s. (\$3,588,951); tax on spirits, £57,705 8s. (\$28,049).

Local sources.—Tuition fees (school pence paid by pupils), £102,478 7s. (\$498,045); rates in contributory unions, £24,559 16s. (\$119,361); subscriptions, endowments, etc., £69,811 16s. (\$339,286). The rate per pupil in average attendance upon the whole amount was \$9.86.

Of the above sum, £35,907 8½s. were for buildings and repairs, leaving for the income of the teaching staff £957,115 6½s. (\$4,651,582), or \$9.50 per pupil in average attendance. From the above statistics it will be seen that the managers of the schools, who have a power over them more absolute than that intrusted to private persons in any other system of public education in the world, are responsible for only about one-fifth of the entire income.

TEACHERS.

On the 31st of December 1890, the commissioners had in their service 7,999 principal teachers and 3,120 assistants, or a total of 11,119 (5,498 men and 5,621 women) classified teachers. Of these, 4,159 had received professional training. There were also at the same date 663 work mistresses and industrial teachers, 150 assistants, and 5,668 paid monitors or pupil teachers, and 152 receiving support and tuition in model schools. These numbers do not include the conductors of 242 convent and 3 monastery schools.

Classification, appointment, and salaries.—Teachers are divided into three classes, viz, third, second, and first. Each class is again subdivided into two grades or divisions, viz, second division and first division. Persons eligible for appointment either as principals or assistants in national schools are (1) those who have been trained in approved training colleges; (2) persons already recognized as classi-

¹ The bill was passed June, 1892, and will go into operation in the fall. The measure, which was at first welcomed by the Irish members of all sections, was eventually opposed on account of the compulsory clause, and also because the schools of the Christian Brothers were excluded from its benefits. Finally, upon the representation of a member that the Brothers' schools would submit to a "conscience clause" protecting children from sectarian teaching, provision was made for extending the bill to these schools. The opposition then ceased and the measure was passed. The fund for giving effect to this act is estimated at about £200,000 (\$972,000).

fied national teachers; (3) persons who after a five years' course as monitors have obtained satisfactory certificates. No person can secure a position under the board without a medical certificate showing sound health. The minimum age for appointment is 18 years and the maximum 35 years. Clergymen are not recognized as teachers by the board. All teachers are obliged to present themselves at the annual examinations which are held in their respective districts each year in the month of July. Teachers failing in this obligation can not continue to draw their salaries. Salaries are graded by class. The classification and average salaries of principal teachers in 1890 were as follows:

Classes.	Salaries.	
	Men.	Women.
I ¹	\$750. 75	\$579. 00
I ²	528. 00	448. 75
II.....	436. 25	368. 75
III.....	346. 00	299. 25

General average: Men, \$442.25; women, \$373.75.

The average salary for assistant teachers the same year was, for men, \$267.25; for women, \$216.

The salaries are composed in part of a fixed amount allowed by the commissioners to each class of teachers, and generally equal to one-half the whole salary. An additional sum is allowed by the board, determined in each case by the results of examinations and the amount of local contributions. Teachers of model schools are provided with full residence, as are also about one-tenth of the teachers of the ordinary national schools. The teachers of convent schools are allowed their choice between the fixed salaries and a grant (rated at 12s. or 10s.) per capita of average attendance. As they receive no money from local sources, their incomes are much less than those of the teachers in the national schools—a discrimination which has long been a cause of disturbance. At the best, the Irish teacher is not so well paid as the English teacher, owing, however, entirely to the meager contributions from local sources. The matter is constantly urged upon the attention of Parliament by Irish members.

Of the total income of the teaching staff for the year ending March 31, 1891, 76.3 per cent was derived from the Government. Since 1879 the Irish teachers have had the benefit of a pension fund, which is distributed upon a varying scale, the maximum number of teachers who may be borne upon the pension roll being 10,700.

Duties.—The duties of teachers in national schools are minutely detailed in official instructions, copies of which must be kept in the school room. Special stress is placed upon the keeping of registers, report books, and class rolls.

It would appear that Irish teachers are subject to all the evils arising

from dual control. They depend directly upon local managers for their appointment, tenure, and extra compensation. At the same time, the major portion of their salaries and all claims thereto depend upon their fulfilling the requirements of the board. The situation explains their general discontent. It must be stated, however, that the high efficiency of the great body of the teachers is beyond question.

TRAINING COLLEGES.

Control and support.—The necessity of special training for teachers was recognized at the very beginning of the commissioners' administration, and a normal school or training college was established by them for this purpose at Dublin (Marlborough Street Training College) and opened for students in 1838. Only young women were admitted at first, but a department for men was added in 1842. The model schools which had been previously established at Dublin became practice schools for the college. In addition to the Marlborough Street Training College, which is under the direct control of the commissioners, three denominational colleges have been established, viz, the Church of Ireland Training College for both sexes and two Roman Catholic training colleges, St. Patrick's (Drumcondra) for men, and Our Lady of Mercy Training College (Dublin) for women. These are under inspection and share in the government grant.

All of the colleges have boarding departments; students who obtain Queen's scholarships are provided with free board and tuition.

Prior to 1890 the government grant furnished the entire support of the official college, while the denominational colleges received only a portion of their support from this source. Dissatisfaction with this inequality led to a change of basis in the year specified. Under present arrangements the government allows fixed grants, as follows: (a) In all the colleges (Marlborough Street included) £50 a year for men students and £35 a year for women; (b) in addition, a diploma bonus of £10 for men and £7 for women for each year of training, on the award of the diploma for training, after a probationary service of two years in the actual work of teaching. If the new grants yield a surplus upon the certified expenditure, such surplus may be applied to scholarships, prizes, the purchase of apparatus and educational appliances, or any other suitable purposes approved by the commissioners of national education. (Report 1890, pp. 24, 25).

The pupils in respect to whom these grants are made must pass successfully the inspectors' examinations, which are held annually at the respective schools. The examinations for women differ somewhat from those for men, the requirements in mathematics and science being less, and needlework, cutting garments, and kindergarten exercises being added.

Statistics.—The number of pupils in training in 1890 was 514, of whom 363 completed their course during the year. Of these, 172 had

entered for a one-year's course and 191 for the complete course of two years. The total grant to the colleges for the year was £139,146 7s. (\$676,251).

Training of pupil teachers.—The regulations as to the training of pupil teachers by their respective head teachers are very explicit. Pupil teachers employed in the model schools really receive a superior order of professional training.

Training by organizing teachers.—The commissioners appoint certain teachers, whose office it is to undertake the organization of large and important schools and to prepare the teaching staff of such schools for the better discharge of their duties. From the detailed instructions issued for the staff of organizers, it appears that their work is similar to that carried on in our own teachers' institutes. They give lectures upon school organization, methods of instruction, discipline, school sanitation, etc. As they are located at schools actually in progress, they are able to supplement their lectures by practical applications and by criticisms of the work of the ordinary teachers. Thus they may be said to combine institute instruction with the exercises of practice schools. No recent report upon this feature of the system is at hand.

WORK OF SCHOOLS.

Course of study.—The course of study in the Irish schools, as in those of England and Scotland, comprises obligatory and optional branches. The former, which are arranged in a graded course covering six years or classes, include reading, spelling, writing, and arithmetic in all classes; grammar, geography in classes III–VI; bookkeeping, classes V–VI; needlework for girls, classes II–VI; and agriculture for boys, classes IV–VI. Vocal music and drawing are optional class subjects. Other optional branches which may be taken by pupils in different classes are kindergarden exercises in the infant, or first, class; geometry, algebra, mensuration, trigonometry, handicraft (for boys); sewing machine, domestic economy, cookery, dairying, management of poultry (for girls), and hygiene; also the physical sciences, navigation, classics, French, German, Irish, and even instrumental music.¹

Examinations.—A portion of the Government grant is allowed upon a scale of payments graded for each class and subject, at a certain rate per capita of passes at the annual examination. No child can be pre-

¹ Great care is exercised to prevent the interruption of the secular programme by religious exercises. It is especially ordered that religious instruction must be so arranged, (a) that each school shall be open to children of all communions for combined literary and moral instruction; (b) that, in respect of religious instruction, due regard be had to parental right and authority, and accordingly that no child shall receive or be present at any religious instruction of which his parents or guardians disapprove; and (c) that the time for giving religious instruction be so fixed that no child shall be thereby in effect excluded, directly or indirectly, from the other advantages which the school affords. (Official Rules and Regulations, 1887, p. 8.)

sented for examination who does not make at least one attendance¹ in the last fortnight of the month preceding the inspector's examination. The system of payment upon results seems to have met with less opposition in Ireland than in England or Scotland, probably because only a small portion of the grant has been thus allotted.

The following statistics show the status of 8,175 schools examined in 1890 with respect to attendance, classification of pupils, and passes:

The number of pupils who were examined on the day of inspection was, boys, 216,092; girls, 277,090, or a total of 543,182.

Grades.	Number examined.	Number passed.	Percentage passed.
Infants.....	114,591	107,017	93.4
First class.....	84,539	73,397	86.8
Second class.....	85,524	71,019	83.0
Third class.....	79,413	62,830	79.1
Fourth class.....	65,022	47,463	72.1
Fifth class (first stage).....	47,755	34,998	73.3
Fifth class (second stage).....	32,331	25,320	75.2
Sixth class.....	34,007	24,233	71.2
Total.....	543,182	446,277	82.1

Of the total number of pupils examined in infants' grade (114,591) 27,449, about 24 per cent, were taught by kindergarten methods.

The report shows that at least one-fifth of the pupils presented for examination had pursued extra optional subjects. Music led the list with 70,315; drawing followed with 45,911; algebra, 12,337. Altogether pupils were presented in 27 extra subjects. Greek and Latin both appear in the list, the former with 10 pupils, the latter with 142.

Course of study in training colleges.—The course of study for the training colleges includes all the subjects enumerated for the elementary schools together with the theory and practice of teaching. Various branches of industrial training are included in the programmes, among which, as also in the actual application of the programmes, agriculture holds the chief place.

MISCELLANEOUS PROVISIONS.

Supply of text-books.—The sanction of the commissioners, as has been noted, was necessary for all text-books used in the schools. At first, owing to the lack of suitable books, they were obliged to publish their own; this necessity having passed away, it became evident that supplies could not be obtained so readily and cheaply from any other source, and consequently the books in use, whether their own publications or those of private authors, are sold by the commissioners and delivered to the pupils at cost price. The annual expenditure for books and other requisites furnished is about \$25,000 more than the receipts from sales.

Average attendance required and length of school year.—As a rule, in

¹ The roll is made up each day. A child who is excused before the literary exercises of the day are completed is not counted in making up the attendance.

order that a school should be recognized by the commissioners it must maintain an average daily attendance¹ of 30 pupils. Special provisions are made, however, for the effects of epidemics, exceptionally severe weather, etc. A school year must be at least 200 days, and must offer at least four hours' secular instruction daily (including, if necessary, a playtime of half an hour) for five days in the week.

Arrangements are made for half-time attendance of factory children, who may be presented for examination and secure payments upon a varying record of attendance, of which the maximum is either 135 days of three hours each or 66 days of six hours each.

Provisions for industrial training.—In their fourth report (1837) the commissioners discussed plans for industrial education and for fostering schools of industry. They proposed the immediate establishment of such a school in the vicinity of Dublin, to be equipped with shops and farm. In their report for the next year they announced as an indispensable condition for aid toward a school of industry, that a work room "shall be annexed to it if it be situated in a city or town, and if it be a country or rural school that a certain quantity of land shall be provided for garden culture. They will consider schools for girls as of the class of elementary schools, but they will require that instruction be there given in sewing, knitting, and other works suited to females."

In the following report (1839) they notice the establishment of their first model farm. This feature of their work has been steadily developed and they have now two agricultural schools, *i. e.*, the Albert Model Agricultural School, Glasnevin, near Dublin, and the Munster Model Agricultural and Dairy National School. The commissioners report in 1890 also 47 school farms in connection with ordinary national schools, and 29 school gardens; from the former 701 students and from the latter 437 were presented for examination. The Glasnevin school serves as an experimental farm for the Marlborough Street Training College; a dairy school is maintained in connection therewith, another at Cork, and departments for dairy instruction at most of the farms.

An experiment in itinerant dairy instruction made in the neighborhood of Dungannon in 1888 has proved sufficiently successful to warrant an extension of the work. Instruction in the theory of agriculture is compulsory in all rural schools for boys in the fourth, fifth, and sixth classes and optional for girls. The commissioners also report that instruction in handicraft has been recently added to the extra branches upon which the boys of the higher classes of the national schools may be examined. Arrangements for classes in spinning, weaving, and other cottage industries are in progress, the Government having sanctioned result fees for proficiency in these arts.

Needlework and knitting have become a part of the course in all

¹ The average daily attendance is found by dividing the total number of complete attendances by the number of regular school days.

national schools for girls, and in many higher classes lace-making is successfully taught.

Domestic economy was taught in 1890 to 3,933 girls in 300 schools. It is generally conceded that the industrial education of girls is most carefully looked after in the convent schools.

Notwithstanding the efforts of the commissioners to promote industrial training the languishing state of many native industries and of the arts in general was urged in Parliament as evidence that technical instruction is not sufficiently regarded. If this be true, however, it is undoubtedly due to causes beyond the control of the commissioners.

In the theoretical elaboration of the system whose principal features have here been outlined, apparently no detail has been overlooked. Judged from the American standpoint, the system would seem to be entirely wanting in the force and spirit of spontaneous action. Nothing else gives a system so strong a hold upon the sympathies of a people nor such powerful effect upon their development. Systems wanting in this element have the character rather of expedients than of deep-rooted institutions, and to this general rule the Irish system is no exception. Its results as a practical expedient may be judged from several particulars.

The average daily attendance maintained in the schools is low, being, as already noted, but 10 per cent of the total population, 47 per cent of the total enrollment, and 59 per cent of the average annual enrollment. This is explained in part by the sparse population of many districts, the poverty of the people, and the absolute demand for the help of the children in agricultural regions. The failure of the system to modify class distinctions is due in some measure to the fact that it has little attraction for the rural gentry of Ireland.¹ In the chief cities the system, it is said, can not compete with the schools of the "Christian Brothers."²

SECONDARY AND SUPERIOR SCHOOLS OF IRELAND.

In dealing with education in Ireland the General Government does not confine itself to elementary schools. To complete our view of the subject reference must be made to secondary and superior instruction, although details can not here be considered.

In Ireland, as in Great Britain and in Europe generally, secondary

¹ See article by Prof. Mahaffy in the *Nineteenth Century*, January, 1893, pp. 21, 22.

² In the debate in the House of Commons over the new law, Mr. O'Brien, member for Ireland, is reported as saying, "The Christian Brothers had practically the education of the whole Irish urban population in their hands, for their schools were situated in all the chief centers of population. The most influential men in every city and large town in Ireland had been their pupils. Their system was regarded in Ireland as the really national system. It was adapted to the genius of the people, it was deeply grounded in their respect and affection." (*London Times*, March 23, 1892.)

instruction, as understood in this country, is imparted in schools whose classification is determined rather by social than by scholastic considerations. The schools of the secondary or middle class in Ireland are either private or endowed. Most of the latter are of ancient date, and although in many cases founded for the benefit of the poor and lowly, have come to be almost exclusively the privilege of the gentry; they are classical schools of the traditional order.

In 1878 an intermediate education board was established by Government to maintain examinations for schools of this class and to dispense Government aid to them in the form of payments for success at examinations or, as it is called, "upon results." Judging by the increase in the number of pupils seeking the examinations, this has proved a popular scheme. The number rose from 3,954 (3,218 boys, 736 girls) in 1879 to 5,236 (3,943 boys, 1,293 girls). The amount of results fees paid to managers of schools on account of these examinations was £13,687 6s. (\$66,520); the number of schools sharing in the same, 244.¹

The oldest institution for superior instruction in Ireland is the University of Dublin (Trinity College), chartered by Queen Elizabeth.

Besides the arts faculty, schools of law, divinity, medicine, and engineering are comprised in this foundation. Roman Catholics were not permitted to take degrees in the university until 1793, when the disability was removed by an act of Parliament. Eighty years passed before they were allowed recognition in the election for fellowships or for scholarships on the foundation of the college. Meanwhile, in 1854, a class of nonfoundation scholarships was established which were not restricted to any religious denomination. The final abolition of "tests," excepting in the case of professors and lecturers in the faculty of theology, was accomplished by act of Parliament in 1873, through the direct efforts of Mr. Fawcett, at that time postmaster-general.

Until 1850 the University of Dublin was the only body in Ireland authorized by law to confer degrees.

In 1849 three institutions, called Queen's Colleges, were established by the Government at Cork, Belfast, and Galway, respectively, for the avowed purpose of maintaining purely secular instruction. In pursuance of this purpose the colleges were organized with faculties of arts, engineering, law, and medicine, theology being excluded. Parliament voted the money for buildings and equipment, and an annual appropriation of £7,000 (\$34,000) for each foundation. In the following year the work was completed by the creation of the Queen's University in Ireland, empowered to conduct degree examinations for the students of the Queen's Colleges. In 1879 this foundation was abolished and the Royal University created in its place. The examinations and degrees of this university are open to all candidates, women included. Alex-

¹ As to the tendency of this policy to foster superficial attainments, see the article by Prof. Mahaffy alluded to on p. 162.

andra College, founded in 1866 for the higher education of women, prepares women for the degree examinations.

The movements of which the Queen's Colleges and the Royal University were the outcome are inextricably involved with the political and religious history of the country. The outcome on the side of the Catholic party, which has maintained a struggle for the official recognition of a university of its own, is the college of the Catholic University, Dublin, founded in 1854.

The rivalry of the universities and denominational zeal appear to stimulate the interest in higher education. Dublin University enjoys a prestige which even those who have suffered from its intolerance in the past recognize with pride. The preparations for the tercentenary of this university, appointed for July, 1892, call forth from every center of learning high praise for its scholastic distinction and for the number and valuable achievements of its illustrious graduates.

To complete the enumeration of superior institutions, mention should be made of the Royal College of Science, Dublin, which is maintained by the science and art department. This is a high-grade scientific school, whose courses of instruction prepare students for the degree examinations of the Royal University.

The same department maintains at Dublin a museum of science and art, which includes also a national library. The numbers annually visiting the various departments of this museum (344,071 in 1890) testify to the popular appreciation of their advantages.

The recent census (1891) reveals a favorable view of the results of education in the country. The census commissioners observe that "the progress achieved in both primary and superior instruction may be considered the most gratifying fact elicited by the census. In 1881 the percentage of wholly illiterate persons was 25.2, whereas in 1891 it reached no more than 18.4 per cent. Of the whole population above 5 years of age, 70.6 per cent could read and write at the latter date as compared with 59.3 per cent in 1881. The addition to the number of schools and of pupils has been relatively small."¹

The improvement in material conditions which is also brought out by the census must be regarded as another favorable indication of the effects of the educational system.

¹In this connection it should be observed that the returns show "a decrease of no less than 15.7 per cent in the number of children under 15 years of age as compared with the returns of the previous decade (1881). This decrease reaches 18 per cent among children 5 to 10 years old, and 19 per cent among children 1 to 5 years. Analysis of the returns makes it evident that this decrease is not due to emigration alone, but is the proof of a check in the normal increase of the population." (London Times, August 19, 1892.)

CHAPTER VII.

INDUSTRIAL AND TECHNICAL EDUCATION IN CENTRAL EUROPE.

SOURCES OF INFORMATION.—(1) *Handwörterbuch der Staatswissenschaften*, edited by Conrad, Elster, Lexis and Loening. Article: *Gewerblicher Unterricht*, by Dr. Carl Roscher, which has been freely used and translated—(2) *Statistik der landwirthschaftlichen und zweckverwandten Unterrichts-Anstalten Preussens, 1890*—(3) *Jahrbuch des Unterrichtswesens in der Schweiz, 1890*, by C. Grob—(4) *Statistik der Unterrichtsanstalten in Oesterreich, 1889-90*—(5) *Statistik des Unterrichts- und Erziehungswesens in Württemberg, 1890-91*.

- I. GENERAL STATEMENT.—(1) *Origin*—(2) *Classification*—(3) *Connection of industrial schools with one another, and (4) with practical life*—(5) *Frequent faults of such schools*. Sunday and evening schools—(6) *Compulsory attendance*—(7) *Sources of revenue*—(8) *Teachers*—(9) *Means of instruction*—(10) *Local supervision*—(11) *School exhibitions*—(12) *Literature, statistics, and history*.
- II. CLASSES OF SCHOOLS.—(A) *Industrial continuation schools, and public draftsmen's rooms*—(B) *Industrial schools for women*—(C) *Lower industrial or trade schools; workshops, schools for builders, and schools for foremen*—(D) *Secondary industrial and commercial schools*—(E) *Schools of design; museums of industrial art*—(F) *Polytechnica or technical universities*.

I. GENERAL STATEMENT.

(1) *Origin*.—The inventions of modern times have perfected many old industries, such as spinning and weaving, and led to the establishment of new ones, such as the building of engines, labor-saving machines, locomotives, and steamships, and the chemical and electric industries. The former mode of perspective drawing has been supplemented by parallel projection, according to the principles of which working drawings are made, which furnish the means of easy and accurate measurement. This has greatly promoted progress in technical pursuits. The liberty of trade, which is barely 50 years old in central Europe, has added another incentive to technical education; it has increased the demands on the talents of industrial men. To develop these talents and special aptitudes is the aim of industrial schools, the youngest branch of the modern school system.

France took the lead in this. German experts, like Eitelberger and von Dumreicher, emphasized the fact that the strength of French textiles, for instance, and the greater value of the products of French art

industry, were not owing to the greater innate talents of French laborers, but to their better and more appropriate schooling in labor. This special education had been going on in France from the time of Colbert (minister of finance of Louis XIV). Indisputable proofs of this have been furnished by the various world's expositions, especially that of Philadelphia in 1876, from which city the German commissioner, Prof. Reuleaux, reported to the Imperial Government, "Our goods are cheap, but poor." These expositions opened the eyes of intelligent men to the great inadequacy of the existing institutions for industrial education, and it may be said that German industry thereupon took an upward start most gratifying in its results, since it was consistently planned and aided by the establishment of higher institutions for technical and industrial pursuits.

The entire system of technical and industrial schools of central Europe (Germany, Austria, and Switzerland) is still in its youth, hence many questions concerning it are yet under discussion; course and method of instruction are still mooted problems, and much less definitely settled than those of elementary and secondary schools for general culture. Another cause that retards an early settlement is the fact that laymen who represent various interests assume to dictate in the management and plans of these schools; hence it is that sometimes the results attained by such schools are not commensurate with the outlay, and their usefulness is questioned.

These schools are established and maintained chiefly by committees and trade unions; by the latter in Saxony, Hesse, Nassau, and Switzerland. When the funds of these are insufficient, or the needs of the country demand it, for instance, for the promotion of the building trades, industrial art, or technical universities, schools maintained by the state are justified. Only in exceptional cases does the state maintain lower industrial schools, in Austria more frequently than in other countries. In some cases the state encourages and subsidizes lower schools, and in others the revivifying and stirring influence and active participation of individual leaders furnish the necessary impetus for the establishment of such schools, and at times also for their maintenance.

(2) *Classification*.—According to the requirements of admission and the objects of the schools they are classed as (a) lower, (b) secondary industrial schools, and (c) art schools and polytechnica. According to the time when instruction is given they are classed as (a) day, (b) evening, and (c) Sunday schools. According to their aim they are classed in industrial continuation schools and trade schools. Beside these classes we may divide the schools into those for boys and those for girls, also into public and private schools. When comparing the statistics of these schools, care must be taken to consider the time devoted to studies; thus, for instance, a three-years' course in an industrial continuation school with four weekly hours of instruction (equal to four hundred and

eighty hours), is about equal to fourteen weeks of instruction in an industrial day school with thirty-five hours per week.

(3) *Organic connection of industrial and technical schools.*—Among industrial schools the practical relation of one class of schools to other classes is not well defined. This may be the cause why some, like agricultural and various trade schools, are given over to the supervision of one governmental department while art schools and polytechnica are given to another. An organic connection is as yet not practicable, although the necessity makes itself felt quite keenly. In the system of schools for general culture and the learned professions the division and limitation of each grade of schools have developed in the course of time owing to the scientific unity, the so-called *universitas literarum*. The distinctions between general and industrial continuation schools, between technical and trade schools, between lower and secondary technical schools, and between secondary and higher schools, or polytechnica—have nowhere been sharply drawn. This makes extremely difficult a definite grouping of these institutions according to plan and course of study, as well as a mutual understanding among themselves regarding their respective functions.

(4) *Connection of industrial schools with industrial life; chief supervisory authorities.*—This connection is very important, since the schools are to serve practical life. A fulfillment of the following conditions promotes the connection:

(a) *Selection of location:* Professional schools that depend upon constant contact with workshops and factories must be located in centers of industrial activity, and must be near to the branches of industry they are to serve.

(b) *Students:* Preliminary practical work or experience gained in workshops is frequently a condition of admission to trade schools. Practical work side by side with academic instruction and separation of the students according to trades in industrial continuation schools, aid in connecting industrial education and practical life.

(c) *Course of study and methods of instruction:* The connection of industrial education with industrial pursuits must not only exist but be thoroughly understood by the students. The more the industrial schools place in the foreground studies which can be immediately utilized in the workshop, and the more they promote technical ability (especially drawing), the more will they rise in the estimation of masters and workmen. In arithmetic, for instance, accuracy and skill are the most essential aims, hence restriction to the simplest modes of solving problems is necessary. In geometry it is much less the logical proof than it is practical application that must be considered; in drawing it is not so much ornamental as it is technical drawing, parallel projection, or the making of working drawings. Side by side with the technical the economic side of an industrial pursuit is to be considered, thus particular attention is paid to bookkeeping and the consideration

of profit and loss. It is altogether wrong, although customary, to expect and demand of industrial schools that they should furnish men who are perfect in certain trades or arts, instead of men able to become masters of their particular branch in the future.

(d) Teachers: The teachers must be trade masters, or at least be in contact with master workmen; in the first case there is danger that the method of instruction will be anything but pedagogical, since men of that kind are apt to take for granted what must first be learned. Teachers should be and are often sent to other centers of industry for information.

(e) The material appliances of instruction should be objects of practical use; at any rate should be suitable for such use. Thus, for instance, actual models should be taken from workshops and museums of industry. In the selection of these appliances practical experts should be consulted.

(f) Supervision. Local supervision should be exercised by successful tradesmen who can aim at close connection between school and trade, raise the standing of technical instruction in the eyes of all concerned, and lend their influence toward regular attendance. These local supervisors should make frequent visits to the schools. It has been found that the chief supervision is best exercised by the state department of trade and commerce, and not by the department of public education. The ultimate aim of all industrial schools, the promotion of wealth, outweighs the means, promotion of education, in the community. As an exception to this are considered the technical universities or polytechnica, which are everywhere in central Europe placed under the supervision of the minister of education.

In Prussia industrial and technical schools have been transferred from one department of state to another. Many of them were placed under the supervision of the minister of education in 1877, but in 1885 they were, after rather unpleasant experiences, transferred again to the minister of industry and commerce. In Saxony the industrial, commercial, and agricultural schools have always been under the jurisdiction of the minister of the interior. In Württemberg there has been in the department of education since 1858 a subordinate commission for industrial continuation schools formed of practical tradesmen and commercial men, also of members of the commission for secondary schools and higher institutions, as well as directors of the school of design. In Baden we find an anomaly in the fact that one industrial art school (Pforzheim) is supervised by the minister of education and another (Carlsruhe) by the minister of the interior. In Switzerland the constitution expressly enjoins upon the federal government to establish technical universities and schools that lead up to them. In Austria, since 1882, a combination of all industrial schools has been effected under the supervision of the minister of education, but the appropriations for these schools are managed by the minister of commerce. The

supervision is exercised by a central commission of industrial instruction, one-half of the members of which are appointed by each of the two ministers. An especial representative of the minister of commerce in this central commission has the privilege of objecting to any measure, and thus to retard and submit it to the decision of higher authority. The inspectors of industrial schools are appointed by both ministers.

(g) Workshops are often connected with trade or industrial schools. (See also No. 17.) It is often left out of consideration that public industrial education is not to be the root, but a blossom, if not a fruit of industry. Schools that are to create new industries are rarely successful.

(5) *Frequent faults of industrial schools.*—(a) Organization: Some schools have aims which are too high. Objects of art industry are made in them instead of more common articles. Entire locomotives or engines are drafted by students insufficiently prepared. Drawings of details of machines would seem more appropriate; students of average talent can thus reach a moderate degree of proficiency where otherwise they would be discouraged in the face of unattainable results. Knowledge of the demands of practical life, constant consideration for the capacity of the student, a proper estimation of purposes, means, and persons, and of the fact that every human being may find a field of usefulness, however modest it may be, will safely guard against the most common fault of industrial schools. One fault frequently encountered is that the teachers do not limit themselves to that which is attainable by, and desirable for the average. However, this is an error often found in young educational institutions.

(b) School hours: Industrial education was at first, and still is, obliged to make use of the time not otherwise occupied by either day school or work in factories and at home, *i. e.*, the time for recreation, evenings and Sundays. The oldest industrial schools were mostly Sunday schools. But any encroachment upon the time of recreation causes overwork, lassitude, repugnance for school, and neglect of religion by the pupils. The increasing estimation of industrial education caused an increase of the time devoted to it. In this regard the commercial schools are in the lead. Of thirty-two commercial schools in Saxony only one is a Sunday school. In the industrial continuation schools in Saxony 36 per cent of the time per week given to instruction falls upon Sundays, 39 per cent upon evenings and week days, and the remainder represents the proportion of time in day schools. In Switzerland 17 per cent of the time falls upon Sunday and 49 per cent upon evening schools. Overwork of pupils who come from factories and workshops is not so common as it is among students of secondary schools who take industrial instruction supplementary to their academic work. It is now considered unquestionable that day schools are far more suc-

cessful than evening and Sunday schools. In most places the teachers of common schools teach in industrial continuation schools, and a special remuneration is given them. Opposition to industrial instruction in the daytime is frequently found among the masters of the workshops in which the apprentices are gaining their practical experience. But this opposition is not very formidable. The absence of suitable rooms and the lack of well-prepared teachers is everywhere deplored. Since Sunday afternoon has for ages been considered by law a proper time for this instruction, it is found difficult to convert the masses to the conviction that day schools should be established.

(c) *Schoolrooms:* The lower industrial schools, both continuation and trade schools, are nearly all suffering from want of suitable rooms, since, in the nature of the case, both tuition fees and public appropriations are frequently insufficient to meet even reasonable requirements.

(d) *Method of instruction:* In this seems to be found the most prominent weakness of special schools. Insufficient consideration for the unequal and deficient preparation of the pupils; the fact that the teachers are not in living contact with practical life, and that they emphasize mere theories, hence false science, are the most glaring faults found.

The following quotations are interesting:

In France they teach what is immediately necessary, with us, the ultimate cause of everything; we teach from the head into the hand; Frenchmen and Englishmen from the hand into the head; hence we pay for our thorough theoretical knowledge with decreased practical capacity. (Felsch.)

The tendency to theorizing is already so preponderant among the Germans over the practically productive activity that one is apt to perceive in our workshops the ancient proverbial school atmosphere which promotes neither pleasure in practical labor nor skill in execution. This atmosphere is not noticed in workshops of countries that have reached a higher industrial level than Germany. (Von Steinbeis.)

Other errors seem to be found in gaps in the courses of study; for instance, the absence of projective drawing before constructive drawing is taken up, and instrumental drawing before projective drawing is commenced. At times proper consideration of artistic taste beside technique is lacking, and at times undue consideration of taste over technique is found. In some schools simple time-saving methods of procedure are neglected; for instance, very carefully executed paintings in water colors absorb valuable time, when simple sketches with lead or color pencil would suffice.

(e) *Supervision:* This is one of the weakest points of industrial education, as is also irregular attendance of the pupils.

(f) *Absence of proper appliances of instruction:* For instance, no specimens of projective drawing, no models in plaster, etc. All these faults are obstructing the progress which industrial schools might make. (See Roscher, in article referred to.)

(g) *Compulsory attendance.*—For general continuation schools compulsory-attendance laws have proved beneficial (in Würtemberg since 1836, in Gotha since 1872, in Saxony since 1873, in Baden, Hesse, Wei-

mar, Coburg since 1874, in other Thuringian principalities since 1876). But for industrial continuation schools compulsion is recommended only where the system of schools is not sufficiently developed or where the schools possess little attraction:

Voluntary attendance in industrial schools separates the chaff from the wheat, prevents thrashing of empty straw, and a sheer waste of valuable time on the part of the teacher and pupil. (Von Steinbeis.)

Discipline and progress commonly improve when compulsion ceases. In Württemberg those continuation schools in which the Government decreed compulsory attendance exhibited very mediocre results. It is a general experience all over the Empire that information through the press, encouragement, excellent results exhibited by some schools, and especially the desire for higher and better paying education in technical and art pursuits, have made compulsory-attendance laws unnecessary. When there was no such law for commercial continuation schools in Germany seventy-nine such schools were established, but during the time in which municipal authorities decreed compulsory attendance only thirty-five were established. The new imperial law for the regulation of industry gives municipal authorities the right to decree compulsory attendance at continuation schools for all juvenile laborers between 14 and 18 years of age. This, however, has only significance for Prussia, where a general law to that effect does not exist.

While compulsion is not found directly advantageous for industrial schools, it proves to be so indirectly, if applied to general continuation schools, that is, post-graduate courses of elementary schools. Young laborers, knowing that they are obliged to attend that kind of school until 17 years of age, or go to an industrial school, prefer the latter, the practical utility of which is very apparent. More than one-half of the 200 schools of Saxony have been established since 1873, the date of the introduction of compulsory attendance for general continuation schools. In communities where this compulsion is exercised the industrial schools attract the more skillful and aspiring boys.

(7) *Sources of revenue of industrial schools.*—(a) Tuition fees: Charging a tuition fee works advantageously, because it makes the student and his family esteem the value of the instruction; it promotes also regularity of attendance and the diligence of the student; it induces poor families to save their pennies, and elevates their self-confidence and self-esteem. Industrial instruction for which fees are charged is attended more regularly and willingly than if it is gratuitous, as the experience in Württemberg plainly showed when a fee was charged in 1853. Previous to that date pupils thought to confer a favor upon a teacher by being present. Indigent pupils can be, and are, released from paying. Sometimes the fees are graded for residents and non-residents, citizens and foreigners.

(b) State subsidies, communal taxes, and other sources. It is always

most desirable that the various trades should subsidize and aid industrial schools, but the entire support seems too heavy a tax upon them, hence city, province, and state governments are called upon for aid. It has been found that the maintenance of an industrial school is an inspiring object for trade unions. There is a *causal nexus* between the school and the standing of the particular trade it represents or chiefly promotes.

The principle formerly adhered to in Prussia, that the community should furnish the building and furniture as well as material, and should pay one-half of the cost not covered by tuition or private bequests, if the state should pay the other half and furnish industrial drawing schools with the necessary models, was not applicable in every case. It did not consider the means of the locality, the extent of the school and its significance for larger or smaller industries. Hence the Prussian government has of late considerably increased its appropriations for such schools. In Saxony no such scheme has been adopted. But when a community or those most directly interested furnish a specified sum for the establishment and maintenance of an industrial school, the minister aids it to an extent decided by himself. No state in Germany has so many industrial schools supported chiefly by representatives of industry. In 1889 there was expended in Saxony \$24,000 for 28 industrial continuation schools, \$28,320 for 29 weaving schools, \$36,720 for 36 other trade schools, and \$87,360 for commercial schools.

The following figures will show the proportions of tuition fees and and other revenues:

	28 industrial continuation schools.	29 weaving schools.	36 other trade schools	32 commercial schools.
Tuition fees	\$10,560	\$8,920	\$10,940	\$77,760
Communal taxes	2,640	3,840	3,120	3,120
Private contributions	3,120	4,800	3,600	4,800
State subsidies	4,560	8,640	13,680	1,260
Interest of irreducible funds	3,120	2,120	6,380	420
Total expenditures	24,000	28,320	37,720	87,360

It seems comparatively easy to support commercial schools by means of tuition fees. In Württemberg the fee is required by law to cover the cost of heating and lighting. The community is obliged to furnish the buildings, but the state usually aids in the erection of buildings by a special subsidy. The remainder of the costs are borne in equal share by community and state. In 1868-69 the state's share amounted to \$13,812, in 1888-89 to \$39,360. In Austria the generosity of philanthropists and those interested in industry has not been called upon, hence the essential expenditures of lower industrial schools have been defrayed by the state exclusively. The 29 schools for the textile industry in Saxony are all established and chiefly maintained by communities, societies, and trade unions, while of the 29 Austrian schools

of that kind only one is not a state school. A similar condition is shown by the other special schools of Austria. During the year 1891 the money from local sources for their maintenance amounted to \$19,753, while the state paid \$699,006. The central government of Switzerland, since 1885, grants subsidies to industrial schools and museums, to the extent of one-half the sum spent by the cantons (states), communities, societies, and private persons. These subsidies amounted to \$30,400 in 1885, and \$64,200 in 1889. They are not allowed to take the place of any part of the sums derived from other sources, and, as a rule, are not to be applied to the erection of buildings, or for heating and lighting, or for furniture and appliances; but for salaries, and extending time of instruction or the course of study by adding new classes. Appliances of instruction, such as models and drawings and additions to libraries, may also be purchased from the money granted by the federal government. General continuation schools are sometimes, by means of these federal subsidies, changed to industrial schools.

(8) *Teachers*.—The best organization and the most lavish appliances of instruction in industrial schools are worthless if teachers are wanting to make proper use of them. Close and constant contact of the teachers with industrial life is the main point. Skillful and practically experienced persons become excellent teachers in industrial schools much more easily than theorizers who have gained a little practice and use it merely for illustration. (Roscher.)

In Würtemberg every candidate for a position as teacher in a technical art school is required to have worked for wages in a shop for a number of years. This is particularly important for teachers of technical drawing, who should insist upon the drawing of plans which are practically applicable. Elementary school teachers commonly lack industrial knowledge as well as skill in mechanical drawing and in constructive geometry. Mechanics usually lack knowledge of construction in other industries. Architects have been found most suitable. In Würtemberg architects, foremen, and engineers are selected as teachers of industrial drawing and allied branches of industrial art, especially if they have spent some time in foreign countries and received pecuniary aid from the state for that purpose. Scanty aid of this kind requires those who receive it to spend part of their time outside of their studies in earning money in practical pursuits. The result is, that such persons aim at what is practically possible. In cases where the state's aid was sufficient to support the recipients without engaging in practical work, the results were anything but satisfactory.

On the other hand, it has been proved that it is always advantageous to pay good, successful teachers high salaries, and to place their future, as well as that of their families, beyond need, otherwise they will seek and find more lucrative occupation in factories and trades. This danger is much greater in industrial schools than in schools for general

culture. In Saxony industrial education, and the schools that represented it, were greatly promoted in 1886 by the establishment of a fund from which pensions are paid to teachers of special schools. This fund offers the same advantages to teachers that other officers of the state enjoy, and thus raises the profession of teaching. In 1891, 124 industrial teachers had become contributors to the fund to the amount of \$7,920, and the state's contribution amounted to \$2,400. This fund has now reached the sum of \$70,560.

In only a few states has professional examination for teachers of industrial schools been introduced. In technical universities or polytechnica the desire has been expressed that for certain branches of secondary industrial schools a professional examination passed before the faculty of the technical university be required. This plan does not consider the fact that men possessing a moderate degree of theoretical and scientific knowledge may well act as teachers in industrial or trade schools. In Baden the theoretical requirements for the industrial teachers were lowered somewhat in 1882, in order to obtain teachers of more practical experience. Before 1882 the requirement was, that such teachers should have passed through the normal schools and a polytechnicum, and have spent some years in practical work. Since that year they may go through a normal school or any other secondary school, a school of architecture, or institution of similar purport, and spend a few years in practical work. The state aids candidates by affording them the means for foreign travel; sometimes the candidates go in groups, sometimes singly. There are supplementary courses arranged for industrial teachers, and in this, Austria has taken the lead. In 1889-90, 32 Austrian teachers were sent to the World's Exposition in Paris, and received each an average of \$94 traveling expenses; 15 teachers were sent to other places with an average of \$51. In 1890 eight supplementary courses in drawing were given to industrial teachers; 94 availed themselves of this opportunity. Two courses in commercial branches were given to industrial teachers; 59 participated. In Switzerland groups of teachers, averaging between 7 and 24, have been sent to famous schools, notably to Winterthur. Two-thirds of the expenses were met by the federal government. In Hesse from 3 to 5 industrial teachers are sent to Darmstadt to go through technical courses lasting from two to three months. They receive aid amounting to about \$20 per month from the association of industries. Common-school teachers apply for these courses during vacation, as do also builders during winter when the weather prevents them from working.

Besides regularly appointed teachers in schools there are also ambulatory industrial teachers especially in Württemberg since 1849, and in Austria since 1881. In Württemberg these teachers attempt to teach hand weavers to produce new patterns and to overcome difficulties arising from new machines. These men usually stay two months at a place. Since the Government is very circumspect in the selection of

such men, it has been found that they do more than teaching; they aid in establishing connection between manufacturers and merchants. During the years from 1849 to 1882 experienced weavers were chiefly chosen who had worked in foreign countries. Such ambulatory courses for hand weaving, industrial bookkeeping, cutting of garments, embroidery, straw weaving, and machine sewing have been held in 28 cities of Württemberg.

(9) *Appliances of instruction.*—As many industrial schools had to prepare their own teachers, so also they were necessarily obliged to make their own apparatus. Up to the year 1860 the drawing models were selected with more consideration for the needs of art academies than for common industrial and art industrial schools. It is, or should be, the object of the central government, so it is claimed, to supervise the selection and application of suitable apparatus in industrial schools. A list of such things (drawings and models) for industrial continuation schools, trade schools, and industrial drawing schools was published in 1888, by the department of industry of the Swiss Confederation, a department which supports also the Swiss permanent school exhibit in Zürich. Other states go further than that. They have certain appliances of instruction made by order of the Government; Württemberg since 1864; Austria since 1881. In Hessa the industrial society publishes model drawings which are officially prescribed for use in industrial schools. The Austrian minister of instruction publishes annually a list of appliances of instruction, embracing drawings, text-books, manuals, and models with practical instructions for wood carving, work in metal, embroidery and lace work. It is stated in each case whether they have been made upon the suggestion or with the support of the minister, or submitted by private manufacturers. The latter are classified as recommended or rejected.

(10) *Organization of supervision.*—(See also 4 (f) and 5 (e). “The importance of expert supervision over the industrial school systems of large cities or provinces and states by school inspectors, has been, as is claimed, undervalued by the governments of many states. The claim has been set up that there ought to be inspectors or superintendents for industrial schools as there are for common schools. The support such men can give to teachers and directors of industrial schools in suggesting, advising, warning, and admonishing, is often more important and effective than pecuniary subsidies. Such inspectors might see to it that every industrial school makes use of the experience of similar schools, and that some schools do not enter upon the forsaken paths of others after they have been found misleading. These inspectors should not have directive, but only advisory power. They should not make uniform the industrial schools, but try to promote an adaptation to local and technical conditions as they may exist. It is not to be recommended that these inspectors shall report in writing concerning the condition of each school they visit, lest written or printed

commendation and laudation may check the development of the school. Only in special cases where certain defects have to be corrected is the written report to the local authorities desirable." (Roscher.)

"The central government, however, should insist upon a brief report of the visits the inspector makes, which report should contain the essential advice he rendered. In case the admonition on the part of the inspector is not heeded without reason assigned, the annual subsidy might be withheld." This is a suggestion frequently found in the pedagogical literature of Germany. Saxony is the only state that has an expert inspector for industrial schools, the first having been appointed in 1884. In 1891 he had to supervise 187 industrial schools in 95 communities. He annually visits about 150 of such schools. For the 28 schools for lace makers in Saxony a special school inspector has been employed since 1858. In Württemberg the supervision of industrial continuation schools is exercised by distinguished teachers of such schools. Of late the question has been considered whether it would not be better to employ a few expert inspectors. Instruction in drawing and in the sciences is separately supervised by experts. The commercial schools appear to be entirely without supervision on the part of the state.

In Hessia the trade schools are supervised by a special committee of the Industrial Society. This committee consists of 8 members. In Austria there are 30 inspectors of industrial schools, appointed for two years, who are not assigned to particular localities, but with regard to their special aptitudes. One inspects the work in drawing, another that in language, or natural science, or mathematics, etc. In Switzerland a college of experts, consisting of 9 members, among whom 4 are architects, appointed for one year by the federal government, supervises all industrial schools. They meet annually in different localities and exchange views, experiences, listen to reports, and thus learn to know all the important industrial schools of the Republic.

(11) *School exhibitions* have been particularly important and beneficial for industrial schools, much more so than for schools for general culture, especially when drawing is a prominent branch of study. If these exhibitions afford a general view of the whole work done by these schools, they will be essentially aided thereby. Such exhibitions act as an impetus to better work and popularize industrial education among the masses. The chief faults of former exhibitions of industrial schools were as follows: First. They were arranged like regular annual exhibitions prepared for pupils and parents, though they were intended to illustrate the essential aims, methods, and courses of schools on a larger scale. Exhibitions arranged by states or provinces should not offer prizes for pupils' work or that of individuals. Such things should be left for local exhibitions. Second. Things were exhibited which proved exceptional work, instead of showing what the average can do. Third. Instead of an arrangement of the drawings according to the prescribed course, they were arranged according to

decorative and æsthetic motives. It is, however, most essential to show the ways by which results have been obtained. Fourth. Exhibitions of industrial schools were mixed with those for general culture or with exhibitions of industries, hence attracted little or no attention, could not be arranged according to their peculiar needs, and lasted altogether too long. An exhibition of industrial schools, lasting from eight to ten days during vacation, will unite teachers and authorities and the general public in fruitful studies and deliberations. Fifth. The written work of a school should not be excluded, so that the connection between intellectual and manual work might be seen. Sixth. The exhibitions were repeated too frequently at first. The result was a diminished participation and waning interest. Between 1850 and 1856 these schools arranged for exhibitions every two years in Würtemberg; from 1867 to 1889 once in seven years. Seventh. Exhibitions arranged by societies did not find general favor. Smaller industrial schools could not compete with larger, better situated, and, therefore, more successful schools. This is the reason why exhibitions are best arranged by state authorities, so that all who derive subsidies from the state may be required to exhibit. Eighth. Exhibitions without a carefully laid plan and expert juries are worthless and remain mere shows. Ninth. Formerly objects were placed side by side which could not be compared.

As the number of industrial schools increases it has been found best to exhibit the work of one class of schools independent of that of another.

Würtemberg held, between 1850 and 1889, nineteen exhibitions of industrial schools. The last one contained, for the first time, apprentices' work, appliances of instruction, as well as artistic productions by teachers of industrial schools. This stimulated the diligence and technical education of the teachers. Saxony exhibited in 1883 the work of 82 industrial schools of the district of Zwickau, and in 1888 that of 150 industrial schools of the whole Kingdom. Here was the work of 800 teachers and 16,000 students brought into view, and the cost amounted to only \$1,500. Upon this occasion the principle was carried out, for the first time, that the course of instruction in any branch should be completely shown by its results in excellent, mediocre, and poor work. This principle was carried out also in the Swiss exhibition of continuation, trade, and drawing schools in Zürich in 1890. The Industrial Society of Hessa has arranged annual exhibitions ever since 1810, but no premiums are allowed. The authorities in Nassau collect the drawings of its 50 industrial schools and have them adjudged by an expert committee.

(12) *Periodicals for industrial schools, statistics, and history.*—Periodicals which give information concerning the organization, methods of instruction, and work of industrial schools are very important for teachers and directors of such schools, since they facilitate an exchange of views, experiences, and plans. When such a periodical is published

by the authorities themselves, it forms the nucleus of influence which extends from the center to the most remote technical schools, and aids the work of the Government by submitting its activity to the judgment of public opinion. Austria has had such a publication since 1883, entitled the "Central Journal for Industrial Education in Austria." It is edited by the highest authority, publishes the laws, regulations, and orders pertaining to industrial education, the statistics of attendance, etc., and gives a good share of its attention and space to foreign schools. In Switzerland the federal government subsidizes several periodicals for industrial education. In return therefor the publishers distribute their papers to students and teachers of all the industrial schools supported wholly or in part by the state. In Prussia the Periodical for Industrial Education has been published since 1886, but it is the result of private enterprise, and only accomplishes what can be expected from private enterprise. The Saxon industrial schools have an organ, entitled the Industrial Review. In Württemberg the Industrial Journal, and in Baden the Industrial Gazette are the organs.

The statistics of industrial schools, especially those of numerous private institutions, are very fragmentary. The best statistical information is found in the Saxon report of the entire system of public education, which not only gives statistics of attendance of pupils and teachers, but also information concerning those who established and maintain the schools, the time of instruction, hours per week, tuition fees, expenditures, etc., for every public and private school. This report is supplemented at intervals of four years by an official list of industrial, agricultural, and commercial schools of Saxony, which list states the name of the school, its location, its founder, the address of its principal, its object, requirements of admission, length of terms, course of study, teachers, number of pupils, tuition fees, etc. This list is furnished to all industrial schools in Germany. The facility for comparison of courses of study and other matters offered by this official list has induced many schools to make essential improvements. Prussia has recently published an extensive report on industrial education, which contains very valuable items for comparison. In Württemberg very meager statistics are published. Baden and Bavaria issue annually brief tables of attendance. A more extended survey of the industrial schools in Baden has been published by Mr. Gasell, president of the chamber of commerce. The commissioners for industrial continuation schools in Württemberg are receiving regularly written reports from all the industrial schools of the Kingdom, but do not publish them. The publication of a history of industrial schools, even though it be nothing but an account of such schools in a small kingdom, would be exceedingly valuable if it showed the first incentive to the establishment of industrial schools, how and when new classes were opened, how certain obstacles were overcome, what means aided in securing success, what faults were discovered, what failures were avoided or made, how the first organization changed

under the demands of modern times, and other points. Such a work would suggest improvement, give information, encourage all concerned, and preserve in a measure the experience of former years, which otherwise would be lost forever.

II. CLASSES OF SCHOOLS.

(A.) INDUSTRIAL CONTINUATION SCHOOLS.

(13) Although participation in the common continuation courses is arranged for boys of 15 to 18 years of age in most of the states of Germany, excepting Prussia (in fact, evening schools are open from two to six hours a week), and although they chiefly offer "that knowledge which is essential for civil life" (law of 1836 in Würtemberg), it can not be said that this instruction is sufficient for the needs of the industrial classes, especially as regards drawing. It must be considered, for instance, that in Saxony, where in 1889 there were 1,912 common continuation schools with 76,000 pupils, a great many of these schools had special drawing classes for shoemakers, tailors, builders, etc.

Industrial continuation schools have a twofold aim: first, to improve and extend general knowledge in language, arithmetic, and geometry; second, to impart industrial knowledge and skill necessary to various industrial branches—as, for instance, technical drawing, industrial book-keeping, and knowledge of business affairs. In Hesse many industrial or trade schools abandoned instruction in arithmetic, language, and geometry in 1874, but very soon after introduced it again, because the common continuation schools could not sufficiently consider these branches. Attempts at combining industrial with agricultural continuation schools miscarried, since one teacher could not do justice to both industry and agriculture. The industrial schools have been blamed for attempting to provide instruction in the most varied industries, hence could never do justice to any one of them; this is depreciating the good that may be attained in favor of something better which is absolutely unattainable.

The Austrian trade schools (for boys of 12 to 15), which are to prepare for distinct trades, are a new kind of schools which are fashioned after Parisian models. In them not only is common-school instruction given, but industrial skill is developed in wood and metal work, modeling, staining, varnishing, distilling, etc. During the third year of these schools the time is devoted to special branches for those who desire them. School workshops are arranged for apprentices who have no workshops of their own. The trade schools in Paris, after which the Austrian are fashioned, have existed since 1873.

Prussia had, in 1890, 1,131 industrial continuation schools with 93,029 students. They were poorly supervised, according to the official statement of the Government. Four hundred and fourteen of these schools had obligatory attendance of 49,325 students. This shows

that the population is not in sympathy with the movement. In central and western Prussia these schools are better supported than in the eastern provinces.

Bavaria has 242 industrial continuation schools, of which 194 are independent and 48 are connected with high schools. They are attended by 29,472 students, of whom only 2 per cent receive instruction in day, and 98 per cent in evening and Sunday schools. In 165 communities local laws prescribe obligatory attendance. Only 7,463, or 24 per cent, of the students attended technical classes, while the others pursue only common-school studies.

Saxony in 1889 had 28 industrial continuation schools (5 of which are 60 or 70 years old), but none have obligatory attendance; their total enrollment was 7,912. In Württemberg the industrial continuation schools are most numerous in comparison with other states. Of communities with more than 2,000 inhabitants, 85 per cent had industrial continuation schools (in Baden, only 32 per cent); the enrollment in 167 communities in Württemberg was 13,649 students. Of every 100 apprentices, 71 attended such schools. It is most interesting to see what studies these students chiefly pursued: Freehand drawing, 7,397; arithmetic, 6,772; technical drawing, 6,346; business composition, 6,089; geometrical construction, 4,531; penmanship 2,921.

Baden in 1889 had 43 industrial schools, with 549 students in preparatory classes, 5,366 regular and 1,907 special students.

Hessia had, in 1886, 73 trade schools in 64 communities, with 4,400 students, to which must be added 7 extended trade schools, of which 2 are connected with industrial art schools; these 2 are day schools.

Austria in 1890 had 14 industrial continuation schools, with 3,474 students connected with state industrial schools. Besides, Austria had 393 independent continuation schools, with 61,567 students (132 schools in lower Austria, 154 in Bohemia, and 107 in the other eleven Crown lands). To these may be added 1,077 students in continuation courses offered by 8 trade schools.

Switzerland in 1890 had 90 industrial continuation schools, trades schools, and drawing schools, 15 of the latter in the canton of Tessin. The most important of these schools are in Geneva, Zurich, St. Gall, Bern, Solothurn, and Aargau.

(14) *Drawing halls.*—For industrial schools drawing is the most important branch of instruction. Diderot remarked: "*une nation, où l'on apprendrait à dessiner, comme on apprend à écrire, l'emporterait bientôt sur les autres dans tous les arts du goût.*" Instruction in drawing which develops the sense of form, artistic taste, and skill of the hand is a supplement to general education acquired by means of the printed page. It promotes acute observation and strengthens the sense which has been dulled by literary work, and is therefore justly an obligatory study in common schools. It has been suggested to establish open drawing halls with teachers who, by living in adjoining rooms, would

be at the disposal of the student all day. Such halls, it is urged, would even assist adults very materially, and aid in bringing school and trade into closer connection. In southern Germany and Austria such open drawing schools have been established, but they were soon afterward brought into connection with established schools.

(B) INDUSTRIAL INSTITUTIONS FOR WOMEN.

(15) These institutions are distinguished from other industrial schools by offering instruction not only in modeling and drawing, industrial arithmetic, bookkeeping, letter-writing, but also in woman's handiwork, embroidery, and articles of industrial art.

Bavaria has 26 such schools, with 2,252 students; Saxony 11, with 1,081 students; Württemberg 14, with 720 students, besides 19 woman's work schools, with 4,511 students. The oldest of these institutions, established in 1868 in Reutlingen, had up to 1889 prepared 269 teachers for industrial and woman's work schools.

Baden has 16 trade and work schools for women, with 1,110 students. Besides these the Woman's Society in Baden maintains 9 such schools, with 1,231 students. Hessa has also several woman's schools for industrial pursuits in five cities.

(C) LOWER INDUSTRIAL OR TRADE SCHOOLS.

(16) *Trade schools* are to be distinguished from industrial continuation schools. The latter serve all or many trades or industries; the former only one, such as the builder's, weaver's, shoemaker's, tinner's turner's, joiner's trade, etc., and though they combine academic studies with manual work, they need constant and close contact with the workshop and factory. The most suitable location for trade schools is at the center of activity of the particular industrial branch they are to serve. Among the requirements for admission into a trade school the essentials are, as a rule, familiarity with the tools of the particular trade, skill in performing simple work, and knowledge of the requisite materials used. According to the regulations of the central commission, which supervises the trade schools of Austria, the establishment of such schools is advisable only "where the existence of industrial life is clearly shown, and where its extent is so large, its capacity for development so undoubted, and its technical character so pronounced, that the particular branch which a school may represent is plainly evident."

The oldest and most numerous trade schools are the weaving schools (in Saxony since 1830, in Bavaria since 1854, in Württemberg since 1855). They have served the weaving trade admirably, especially at times when the ever-changing fashion preferred certain textures to others, or when under the presence of competition the handlooms gave way to power looms, when again, certain finer textures could not be done on power looms, and handlooms had to be used; when new or

intricate designs required not only skillful hands, but also a finely developed sense of form and color. It is well known that the Swiss watch-making industry has been essentially promoted by the 9 watchmaker's schools that served to introduce new devices and improvements.

One objection has been raised against trade schools; it has been said that they limit the horizon of their pupils instead of widening it; their attention is directed toward the production on a large scale which presupposes division of labor, while workshops require knowledge of all the bearings of a trade. This has led, in Hussia, to requiring the graduates of trade schools to pass through a supplementary course which teaches all the bearings of one trade. This unfavorable judgment of trade schools in Hussia is met by a different one, almost diametrically opposed to it, in Saxony, Würtemberg, Baden, Austria, and Switzerland, and may find its cause in the fact that the students are obliged to earn wages during the time they attend trade schools.

Since 1884 the secretary of the interior in Baden arranges from time to time in Karlsruhe for courses of instruction to trade masters for the sole purpose of making them acquainted with new industrial devices. These courses are intended for soap-boilers, tanners, shoemakers, watch-makers, metal-workers (etching and galvanoplastic), dyers, fresco-painters, paper-hangers, and plumbers; the courses last one or two weeks each.

In Prussia the industrial-school system is comparatively little developed. In 1879 the 11 mining schools, with 437 pupils, were the only organized and successfully directed industrial schools of the Kingdom. The weaving and dyeing school at Crefeld was reorganized in 1883. It is a large institution, well attended, and influences the great silk trade of that town. In Hanover 13 weaving schools and 8 weaver's apprentice shops are found. In Westphalia there are technical schools for the metal industry. In other parts of Prussia are found schools of ceramics, and basket-braiding schools in Silesia and the provinces of Eastern Prussia. Magdeburg and Flensburg have special schools for joiners and wood-carvers. On the shores of the North Sea and the Baltic are situated 14 navigation schools, and, since 1887, 5 schools for river navigation have been opened. The trades unions maintain 294 trade schools (67 for barbers and hairdressers, 29 for painters and decorators, 24 for cobblers, lock and black smiths, 21 for bakers and confectioners, 20 for tailors, 10 for joiners, etc.).

Bavaria has 36 trade schools, of which 23 are in upper Bavaria, 3 weaving, 3 carving, 13 music, and 1 potter's school, and, since 1885, 5 schools for arboriculture.

Saxony has 29 trade schools for weaving, knitting, and passementerie, with 224 hand and 67 power looms, 132 knitting machines, and 30 passementerie handlooms. Five of these schools are day, the others are evening schools. The State also maintains 6 navigation schools on the Elbe River, while trade unions and associations maintain 28 lace-

making, 1 embroidery, 4 straw-weaving, 11 house industry, 2 mining, and 39 other trade schools. That the trade schools of Saxony enjoy great confidence beyond the limits of the Kingdom is seen from the fact that the great German labor associations (notably the watchmakers, turners and woodworkers, tanners, millers, and tanners) support them.

Württemberg has 4 weaving schools, but no other trade schools.

Baden has 3 music schools (not conservatories, for they belong to a higher group of schools), 1 wood and ivory carving, 15 straw-weaving, 1 basket-braiding, and 5 blacksmith's schools.

Hessia has 11 carving schools and schools for decoration, lacquers, and hairdressing.

Austria can boast of a very extensive and splendidly directed plan for industrial education on the part of the state. The representatives of the trades do not much participate in their management or maintenance. Twenty-nine weaving schools, of which 2 are small institutions, having no power looms; 30 schools for wood and stone industry, for variety ironwork, ceramics, and glass industry; 16 for point-lace workers and artistic embroidery; 2 for the manufacture of musical instruments; 1 for leather industry; 1 for polishing of precious stones; 1 for toy manufacture, as well as 18 for basket-braiding. The state in 1889 published a provisional course for instruction in weaving schools to make a beginning in systematizing trade schools.

Switzerland has 9 schools for watchmaking, 2 for weaving, 2 for carving, 1 for toy-making, and 1 for basket-braiding.

(17) *Workshops* are connected with many industrial schools, especially with weaving schools, but sometimes we find them independent of any school. In that case practical and not academic studies are pursued. They resemble the former apprentice shops, but offer instruction on a large scale. Some writers recommend them, others see in them nothing but places for training of amateurs, and therefore object to them. It is said that stipends for traveling would be vastly better. This objection does not refer to the shops connected with weaving schools. Experience has found that poorly paid masters in school shops teach only the less instructive branches of a trade, hence the many complaints of apprentices that their training is one-sided, and the further complaint of the trades people themselves, who claim that these school shops compete with them in the labor market (buildings furnished gratuitously and unpaid labor enable these shops to sell their products at reduced prices). It appears prudent not to use the products of the apprentice shops as a means of meeting their expenses. Another danger is to be considered and to be carefully guarded against, namely, the often-found waste of time and material. The students are not trained in economy, but only in industrial skill. The technical leader of the shop must therefore be economically well trained. All the state railroad shops in Germany have apprentice shops. In Austria workshops are very frequently found connected with trade schools.

(18) *Schools for the building trades.*—The large number of builders (Germany in 1882 had 373,000 masons and 184,000 carpenters) justifies the existence of special schools for them. These schools do not attempt to prepare architects or engineers of the lower order, but simply skilled laborers for the building trades. The first of these schools was established in Paris, 1740; the first in Germany, in Munich, 1823; the second, in Brunswick, 1831; the third, a state institution, in Saxony, 1837. The requirement for admission is, or ought to be, one year of practical work in the trade. In Saxony these schools give instruction only in winter and have a course of four years. When such schools are kept open in summer they have one-seventh or one-tenth the attendance they have in winter. While in Saxony the course is restricted to masonry and carpentry, in other states machine-building is frequently connected with it. The tuition fee in Saxony is 30 marks, or about \$8; in other states it is from \$25 to \$30, owing to insufficient state subsidy.

Prussia in 1891 had 9 schools for the building trades, with 1,825 students in overcrowded classes. In 1890, 870 apprentices were rejected for want of room.

The school in Brunswick alone had 1,000 students, mostly from Prussia. The state authorities in Prussia are contemplating the establishment of a tenth school of this kind.

Bavaria has 4 schools for builders, with 1,220 students. Saxony in 1891 had 5, with 702 students. Of the 154 hours devoted to instruction in the four years, 97 were devoted to drawing. The annual expenditure for 4 of these schools was \$22,560.

Württemberg has a royal school for the building trade in Stuttgart. It was founded in 1845, and has 503 students, many of whom study surveying and machine-building.

Baden has one school at Karlsruhe, with 253 students, and gives practical exercises in workshops for masons and carpenters. Hesse 1 school, Darmstadt, 81 students; Anhalt, 1 school, maintained by state and city. Austria has special departments for the building trades in its 11 schools for foremen, which were attended by 1,336 students in 1890.

(19) *Schools for foremen.*—Most industrial continuation schools, giving instruction on Sunday or in the evenings, and at best only from 10 to 16 hours a week, can not prepare foremen or superintendents of shops for machine-building, spinning and weaving factories, etc., because it would require an additional number of years of study, and because the technical preparation of such men necessitates special training. The government in Saxony established in 1855 a school for foremen, the first of its kind. Requirements for admission: Age 16 years and a practical experience of two years in workshops. Length of course one year and a half. Hours per week, 35 to 45. These schools restrict themselves to what foremen really need, so that the students shall not

overvalue their capacity and forsake shop and factory to enter the drafting room. They are in fact intended for industrial under officers.

Prussia has 4, Saxony 2, Austria 14 of such schools. The school in Chemnitz chiefly prepares soapboilers, dyers, and millers. Since its establishment in 1855 it has had 3,100 students. The Austrian schools together have at present 2,100 students who are preparing themselves for the building trades, technical mechanics, industrial arts, and chemical industries.

(D) INDUSTRIAL SECONDARY SCHOOLS.

(20) *Secondary schools*.—Pursuing the course of a polytechnicum presupposes graduation from a classical or a modern high school, and hence can not be completed before the close of the twenty-fourth year of age.

The education offered in a polytechnicum is much too high for common industrial purposes, because it is largely theoretical, and prevents the student from acquiring practical preparation and skill during the time when alone such skill can be acquired. Hence industrial secondary schools, which stand between the lower industrial schools and technical universities and offer the strict discipline of a high school, seem to meet the needs of the people. The gradation in trades and industries, both in kind and extent, necessitates a gradation in the schools preparing for them. The famous statistician Engel calculated the cost of education and maintenance of a laborer at 15 years of age to have been \$888; that of a man with secondary education at 20 years of age to have been \$2,904; and that of a student of a university at 25 years of age to have been \$6,600. The absence of opportunities for obtaining a secondary industrial education must therefore work disadvantageously upon many strata of society, because it restricts them to a lower industrial education or lifts them up to an elevation where they can not support themselves, the absolutely necessary connecting link between elementary and higher schools being wanting. Lower schools are apt to push their talented students forward unduly, while polytechnica are forced to lower the requirements for admission, hence industrial secondary schools will aid the lower schools by relieving them of elements which are apt to disturb them, and relieve the polytechnica by drawing from them students insufficiently prepared. These schools will also relieve the nation of elements which are neither fish nor flesh—of that half-learned industrial element which claims to understand everything but knows nothing thoroughly. Civil engineers, poorly prepared and loose in every joint of true education, are found in great abundance, while the great centers of industry need men such as industrial secondary schools alone can furnish, viz, machine builders, common architects, bridge builders, surveyors, engi-

neers, chemists, superintendents of small factories, planners and designers, etc. The great army of labor, consisting, as it does, of privates and a more than sufficient number of generals and colonels, needs more underofficers.

A remarkable short-sightedness is exhibited from time to time in discussing secondary industrial schools. Some claim that there is no urgent necessity for them, "because the technical universities furnish a sufficient number of students who fail in examination for the higher honors; hence offer men of the second rank, or small caliber, for technical pursuits." To this the answer is given that unfit industrial "officers of the staff" are not necessarily fit subaltern officers; that teachers of higher schools insufficiently prepared are not necessarily well enough prepared to be elementary school teachers. The Austrian minister of education in 1880 had to meet the objection to secondary industrial schools, "that they came into competition with polytechnica," by showing, statistically, that these secondary schools attracted elements which were neither wanted in the polytechnica, nor in fact could lay claim for admission there.

The Society of German Engineers, consisting of more than 6,000 members, declared, in 1889, that secondary industrial schools were a necessity to be provided for by the state. The industries for which they prepare are spread over the whole country. Such schools can flourish only when they are independent institutions, but not if appendages of other schools. If the State fails to establish them the larger cities are not likely to do so, and "private institutions with glittering programmes, unfulfilled promises, low requirements for admission, attractive uniforms for the boys, overcrowded classes, poorly paid and insufficiently prepared teachers, and pompous, emblazoned diplomas," will arise—institutions which are "worked" for a money consideration.

The oldest secondary industrial school in Germany is the one established in 1836 in Chemnitz by the government of Saxony. It has since its establishment admitted 4,100 students and has served as a model for similar schools in other states, notably in Austria. The students when admitted have a high-school education and have acquired the privilege of serving as a volunteer in the army for only one year. The course of study for the technical mechanics' branch and technical chemistry is three and a half years, that for architecture three years.

Prussia has no such secondary schools. How acutely this want is felt is seen from the fact that the polytechnica of Prussia have 29 per cent, while the same institutions in Saxony and Austria have only 10 or 11 per cent of special students, that is, students who are not graduates of classical or other secondary schools. In the polytechnicum of Hanover this percentage rose to 47 per cent in the year 1890-91.

The following table is instructive:

Winter of 1890-91.

Polytechnica.	Regular students.		Special students.		Regular and special students.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Prussia:						
Aachen.....	137	.....	51	.....	188	.....
Berlin.....	1,169	.....	330	.....	1,499	.....
Hanover.....	308	.....	272	.....	580	.....
	1,614	71	653	29	2,267	100
Saxony:						
Dresden.....	276	89	33	11	309	100
Austria (4 institutions).....	1,186	90	132	10	1,318	100

These so-called special students, special because they did not fit into the regular course, oblige the polytechnicum to perform the duties of secondary schools, which involves a weakening of its character as a technical university. Numerous students from Prussia in secondary industrial schools of other states prove the want spoken of; thus, of the students in such schools in Chemnitz 193 are Prussians and 670 are Saxons; of those in Mittweida 591 are Prussians and 106 Saxons. The school in Hildburghausen has 247 Prussians, that in Buxtehude 445 Prussians, and only 116 students from other states. The minister of commerce and industry in Prussia acknowledges that the reorganized Prussian industrial schools "can not be of much service to the trades, nor be preparatory schools for the polytechnica, nor are they properly organized to perform the functions of secondary schools." It is officially recognized that Prussia will have to establish secondary industrial schools independent of other secondary institutions in order to complete its otherwise so well organized system of industrial education.

In Prussia the so-called technical classes, appendages to common high schools, were attended by 166 students in 1888. Similar classes in Aachen, Barmen, and Gleiwitz have been discontinued for want of attendance. A few other attempts (in Cologne and elsewhere) are still in embryo. Bavaria has three industrial schools, at Munich, Nuremberg, and Augsburg, with 364 students. When these schools were established it was hoped that their graduates would at once enter upon practical pursuits, but most of them entered technical universities. In Mecklenburg, Neustadt has 150 secondary industrial students; in Saxony, Chemnitz has 313, Mittweida, 479; in Meiningen, Hildburghausen has 451; in Bremen, Buxtehude has 560.

In Austria the modern high schools (Realschulen) served from 1851 till 1867 as industrial schools, preparing students for higher technical study, as well as for practical pursuits. This was found to be an error, and since 1876 the state has established 15 industrial secondary schools (2 in Vienna, 2 in Brünn, 2 in Pilsen, 1 in Salzburg, Graz, Innsbruck, Trieste, Prague, Bielitz, Cracow, Czernowitz, and Reichenberg). These

schools are organized into 8 industrial schools, with 1,725 students; 14 schools for workmen, with 2,100 students; and 14 industrial continuation schools, with 3,474 students; and numerous special technical courses. These state schools form the centers for the organization of smaller and lower institutions, and have proved of inestimable value to the industrial life of the Austrian Empire.

Switzerland has one secondary industrial school at Winterthur, which had, in 1885, 350 students.

(21) *Commercial schools.*—The commercial schools, established chiefly by commercial societies and corporations, sometimes by private persons, but rarely by communities, give splendid testimony to the desire for education among commercial people. They are an effective means against the increase of a commercial pauperism that is detrimental to the social and economic conditions of the state. Technical education flourishes more in the commercial than in any other pursuit. In Württemberg it was ascertained that 12 per cent of all apprentices were commercial apprentices. Commercial schools are classified as continuation and apprentice schools with supplementary instruction that accompanies the practical work. Beside these, which are all evening or Sunday schools, there are commercial day schools with a course of two and three years. A formidable obstacle of many commercial schools is found in the insufficient preparation of their students, who, despite a full course of elementary education, are weak in orthography and grammar, so that instead of instruction in commercial business style, as the course of study announces, instruction in orthography, etymology, and punctuation is required, or, in other words, the elements have to be taught. Good commercial schools impart knowledge in a much more complete and systematic manner and in better scientific connection than practical work in any commercial business could give it, since the latter is always, and needs must be, restricted to a certain line of transactions.

The Society of Commercial School Principals in Saxony, in 1881, published a sketch of the course of study for commercial schools. According to that the most essential branches are commercial arithmetic, bookkeeping, correspondence (with accounts), and commercial science; that is, the systematic presentation of the principles of commerce and its rules and regulations as derived from the laws of the state and political economy.

The tuition fees in most commercial schools are much higher than in industrial schools, the maximum being \$90 a year (see also section 7). The cause of this is chiefly that the knowledge obtained in commercial schools (science of commerce, bookkeeping, accounts, arithmetic, correspondence, languages, knowledge of merchandise, banking, and penmanship) can be immediately applied in commercial life, and that the merchant does not suffer like the industrial man from a conflict of interests. This circumstance facilitates the establishment of commercial

schools. The oldest is the one at Gotha, founded in 1817 by Arnoldi, the founder of institutions for insurance in Gotha. The second was established in 1831 in Leipzig by the Merchants' Guild. The imperial law regulating commerce and industry says, in section 154, that commercial apprentices under 18 years of age may be required to attend continuation schools. (See, also, section 6).

Harry Schmitt established 165 commercial continuation schools in Germany, of which 48 were established before 1871, 117 since that time. According to his statement Saxony has 1 commercial school for every 100,000 inhabitants; Baden 1 for every 150,000; Hesse 1 for every 166,000; Württemberg 1 for every 286,000; Prussia 1 for every 368,000; Bavaria 1 for every 500,000. Bavaria has 8 commercial schools (3 of which are public), with 1,267 regular and 46 special students. Saxony, 4 advanced commercial schools, with 993 students, two commercial courses of one year each, with 114 students, and 32 commercial apprentice schools, with 2,257 students; total, 3,364 students. Württemberg has in nine cities commercial continuation schools, mostly special classes of industrial schools. The polytechnica in Karlsruhe, in Brunswick, and in Vienna had originally commercial sections, but they were abandoned. The polytechnicum in Riga (in the German provinces of Russia) has a commercial section to this day.

The number of hours a week is greatest in Dresden; then follow Leipzig, Chemnitz, Berlin, Munich, Stuttgart, Nuremberg, Plauen, Bautzen, in the order named. Austria maintains 12 secondary commercial schools, 28 lower schools of that kind, 59 independent commercial schools, and 18 connected with other day schools; together, 117 institutions for commercial education.

(E.) INDUSTRIAL ART SCHOOLS, SOCIETIES, AND MUSEUMS.

(22.) *Industrial art schools and societies.*—As a result of the World's Expositions of 1851, 1855, and 1862 it was noticed, in England, Austria, and Germany, that industrial art in these countries, despite its technical perfection, was far inferior to that of France. It was recognized that the great advantage which France had over other countries was not owing to innate skill and taste, but to the gradually trained workmanship, which training had been going on ever since the latter part of the seventeenth century. The leading men came to the conclusion that this difference could only be overcome by instruction and good models. The South Kensington Museum (a museum, school, and teachers' training school combined), founded by the prince consort in 1857, with which numerous art schools and industrial museums in smaller towns are closely connected, proved its wholesome influence as early as the London Exposition in 1862. It received between 1861 and 1863 an annual appropriation of \$170,000. France, in order not to be outdone, appropriated for its Conservatory of Arts and Trades the sum of \$1,000,000 and an extra appropriation of \$30,000 for

purchases at the London Exposition. Upon the motion of von Eitelberger Austria established in 1863 a museum for art and industry and in 1868 a school for industrial art. Later the various German states followed the example; in 1865 the Industrial Hall at Carlsruhe was opened; in 1867, the Museum of Industrial Art at Berlin and also the National Museum at Munich.

The object of industrial art schools is to revive among industrial people the taste for art which was so great at the close of the Middle Ages, and also a comprehension of the demands of industrial art among artists.

The training of industrial men toward artistic perfection in their respective branches is the essential point, not the inoculation of art upon trades. (Stockbauer.)

It should be insisted upon that only such students can be admitted as have practical shop experience. Since industrial art consists in the application of the laws of architecture, plastic art, and painting, to industrial products, the industrial art schools must foster these three branches particularly. These schools must have close contact with high art (a large artery can furnish blood for small vessels), but they must also, in order to act beneficially, have contact with technical institutions of which they formerly were a part. Yet their success demands that they be independent institutions, and not mere appendages. (Roscher.)

It has recently been urged that industrial art schools should, less than heretofore, foster the historic ornament, since that stimulates the student's prejudice and deprives him of the liberty of creative power. Hence it is recommended, especially by M. Meurer, that industrial art should abandon the ancient traditions of artistic style and return to the original fountain of nature. The frequent change of style in modern industrial art, the constant experimentation with the artistic means of expression of all ages and nations, is mostly owing to neglect of the study of nature. Says M. von Schwind:

Museums, with their bewildering multitude of objects, dig up the soil around the germinating power of creative genius, and influence it like fifty climates upon a plant that can stand only one.

The numerous modern collections of models of style are poor textbooks; they act like cribs in a classical school. Instead of "stable-feeding" with printed models, Meurer recommends the "pasture-fodder" of nature. Too much originality in schools must not be encouraged either, for the much admired industrial art of less gifted oriental peoples shows that an uninterrupted artistic tradition is an essential condition of perfection in industrial art.

Prussia has industrial art schools in Berlin, Frankfort-on-the-Main, Düsseldorf, Cologne, Cassel, Hanau, Breslau, and the establishment of several others has been contemplated. Bavaria, Munich (1885, since 1868 a state institution, has a woman's department) and Nuremberg, both schools have 567 students. Saxony, Leipzig (1871), formerly an insig-

nificant art academy, now a flourishing art school devoted to the publishing trade, 207 students; Dresden (1875), 289 students; Plauen (1877), reorganized in 1890. Würtemberg, Stuttgart, 104 students; the industrial continuation schools of Würtemberg have, in places where a special industrial art predominates, shops for modeling, chasing, engraving, and wood carving. Baden, Karlsruhe (1878), 224 students; Pforzheim (1877), 219 students. Hessia, Mayence (1865), Offenbach (1868). Austria, Vienna, 207 students; Prague, 243 students; Lemberg, 182 students, besides a special school for photographic art in Vienna, 164 students. Switzerland has industrial art schools in Basel, Bern, Geneva (2), Lucerne, Zurich, and la Chaux-de-Fonds.

German industrial art societies combined to form a large union in 1883. The most numerous of these societies are those in Munich, Pforzheim, Frankfort-on-the-Main, Karlsruhe, Stuttgart, Berlin, Oldenburg, and Dresden.

(23) *Industrial art museums*, with libraries and collections of models for ornamentation, are necessary supplements to industrial art schools, which otherwise would remain mere drawing or modeling schools. Again, without industrial art schools the museums lose a great deal of their usefulness. "In many cases the interest of the collectors who aim at completeness and rarities, and also the interest of the scientists and the historians who aim at a faithful representation of the past and its development, gained the upper hand over the practical purpose of such an institution, namely, the fostering of modern industrial art. By no means should classical productions of the present time be excluded, lest the show windows on business streets would give more useful suggestions to workmen than the museums of industrial art. Printed labels and explanations attached to the objects in a museum are preferable to catalogues, which soon get out of date. Printed guides should treat historic, archæologic, and ethnographic points of view less fully; the development of art in industry must at all times be considered the vital object. Therefore suggestions regarding the technique, and the dependence of ornament upon material, or the relation between utility and ornament in industrial objects, is of much more importance than uncertain statements regarding time and place of origin. Reference to models and to periodicals and books which may be found in the library connected with the museum, should be found in close proximity to the objects displayed. The superintendents of many industrial art museums in Germany and Switzerland are empowered to copy, for industrial art workers and other people, sketches, plans, and detailed drawings of objects contained in the museum."

(F.) TECHNICAL UNIVERSITIES OR POLYTECHNICA.

(24) The German Empire has 9 polytechnica; Austria, 4; Switzerland, 1; and German Russia, also 1. All of these institutions were founded during the nineteenth century. The École Polytechnique, in

Paris, was established in 1794. It was a preparatory institution for a small number of engineers of the military and civil service who received their higher training in special schools for artillery service, general staff of the army, and bridge and railroad building. Still in regard to time it is justly entitled to the distinction of being the oldest polytechnicum in the world. Prague followed in 1806; Graz, in 1811; Vienna, in 1815; Berlin, in 1821; Karlsruhe, in 1825; Darmstadt, in 1826; Munich, in 1827; Dresden, in 1828; Stuttgart, in 1829; Hanover, in 1831; Brünn, in 1850; Zürich, in 1855; Brunswick, in 1862; Riga, in 1862; and Aachen (or Aix-la-Chapelle), in 1870.

With the exception of Aachen, the German polytechnica have developed from lower or secondary industrial schools. In several of them (notably Berlin, Dresden, and Hanover) it was the intention originally to prepare skilled workmen and foremen for great building enterprises and factories.

It was greatly to be regretted that the schools that were intended to prepare the students for the polytechnica, that is, the so-called Realschulen, came into existence later. Saxony had, up to the year 1834, no secondary school like the Realschulen, and up to 1843 only one. The first Prussian Realschule was established in 1832 in Berlin. Not having proper preparatory schools, the polytechnica were obliged to admit their students with a very low standard of preparation. But the sudden expansion of the railroad system made it necessary to elevate the objects of the polytechnica. The application of steam as a motive power made greater demands upon technical skill in the building of roads, bridges, locomotives, and machines. During antiquity bridges were rarely built with a span of more than 25 meters; during the middle ages spans of 50 meters were attempted, but the application of iron enabled bridge builders to go far beyond that. Lately bridges have been built that span 500 meters. To this must be added that in large cities the introduction of gas, water, and electricity gave a powerful impetus to technical education. As a pioneer in this transitional period the École Polytechnique at Paris laid stress upon the strict scientific study of mathematics and the natural sciences—the true bases of all the technical sciences. Vienna emphasized a combination of the technical sciences into an organically well-articulated unity. Karlsruhe and Zürich paid special attention to general culture and scientific investigation, raised their requirements for admission, and adopted the constitution of a university. The technical institutions in existence changed their constitutions and courses of study, and became polytechnica; thus Graz in 1864, Zürich in 1866, Munich in 1868, Dresden in 1891, Darmstadt in 1877, Hanover in 1879.

Their official name in Central Europe is technical universities. During the years from 1877 to 1880 representatives of these various technical universities (in Germany, Austria, and Switzerland) assembled and determined upon a uniform organization of these institutions.

This assembly agreed that the technical universities were to offer for technical pursuits the highest possible education required for state or communal service and industry, and to foster and promote the technical arts and sciences. Their curriculum was made to embrace four courses, architecture, civil engineering, mechanical engineering, and chemistry. The comprehensive term civil engineering embraces road-building (including railroads), surveying, hydraulics, and bridge-building.

With the development of industrial schools into polytechnical universities a decrease in the number of attendants was unavoidable. There is less demand for the highest talent than there is for men of medium caliber. Instead of recognizing the decrease in attendance as a consequence of increased requirements for admission, a small number of teachers in these institutions try to raise the number of students by lowering these requirements, while the greater number of teachers consider this procedure a menace to the scientific results. If the proposition of the former were adopted, the institutions would again become what they once were, universities and secondary schools combined; that is, through the main portal would enter students well prepared, and through the back door, so-called special students with an inferior preparation. The number of such special students is comparatively small in Austria and Saxony, while in Prussia it is very large. The university study of young men who are only prepared for secondary schools has great disadvantages, scientific, economical, and social. These students retard the progress of those better prepared than they, and are confronted with demands upon their own strength which they are unable to meet. Hence many of these special students enter industrial life with half-digested knowledge, but they are more pretentious even than thorough students. Indeed, these weaklings require a greater expenditure of time and money than good students do, and that which they accomplish in after life is often faulty and inferior, all of which causes a crippling of German industry in the competition in the market of the world. Steinbeis says, "It must be regarded as a very lamentable fact that many students of technical universities have little or no practical skill or knowledge of industrial economy; therefore they may be made useful at the drawing board, but not for practical management and government." Genauck points out the notable fact that few machine engineers who have gone through a technical university are managing factories or workshops on their own account, while many experienced engineers of much inferior theoretical preparation fill responsible and remunerative positions. He also mentions the fact that theoretically educated architects are frequently found in the service of building masters of much inferior education. The Journal of the German Society of Engineers during the years from 1888 to 1891 points out the danger of students of insufficient preparation attending a technical university.

Scheffler's university calendar contains the following statistics:

Summer, 1891.

	Regular professors.	Special professors.	Regular students.	Special students.
Aachen.....	27	11	166	61
Berlin.....	32	30	1,156	269
Brunswick.....	22	12	160	108
Darmstadt.....	25	8	289	62
Dresden.....	34	9	302	36
Hanover.....	29	10	387	288
Carlsruhe.....	34	12	488	38
Munich.....	38	12	560	138
Stuttgart.....	26	18	207	73
German Empire.....	267	122	3,715	1,073
Brünn.....	17	6	145	39
Graz.....	15	15	143	10
Prague.....	16	8	178	35
Vienna.....	26	14	720	48
Austria.....	74	43	1,186	132
Zürich.....	51	17	533	
Riga.....	17	21	840	

The possibility of comparing the attendance of different schools is very limited, owing to the difference in the requirements for admission and because some institutions have sections which are wanting in others; for instance, Aachen and Berlin have each a section for mining; Brunswick, one for pharmacy; Carlsruhe, one for forestry; Munich, one for agriculture; Riga, one for commerce.

A fusion or combination of these technical universities with the old universities for the learned professions has been frequently and emphatically urged. It has been said that such a fusion would make unnecessary separate buildings, and do away with the necessity of duplicating certain appliances of instruction, such as libraries, botanical gardens, chemical and physical laboratories, mineralogical, geological, and archæological collections. W. Roscher urges this especially in the interest of a unified national education, so that between the learned professional men, theologians, lawyers, physicians, and teachers on the one hand, and the so-called practical men, agriculturists, engineers, machinists, etc., on the other, no feeling of antagonism or disdain may arise. But this argument, strong as it may be, is not likely to prevail in the near future.

CHAPTER VIII.

EDUCATION IN RUSSIA.¹

INTRODUCTORY SKETCH.

The Russian Empire extends over one-seventh of the land surface of the globe, occupying, with its inland seas, an area of 8,644,100 English square miles. Its 114,873,008 people are scattered over that vast expanse; in European Russia alone there are 95,870,810 people within a space of 2,095,504 English square miles.

The government is that of an absolute, hereditary monarchy, the Czar controlling the whole legislative, executive, and judicial power. The administration of the affairs of the Empire is intrusted, however, to four great councils, each with its own distinct functions. These are (1) the council of state which, acting as a consultative board, examines the proposed laws presented to it by the ministers and discusses the budget and all expenditures; (2) the ruling senate, which is divided into nine sections, has deliberative and executive functions, and is also the high court of justice for the Empire; (3) the Holy Synod,² which superintends the religious affairs of the Empire; but must refer all decisions to the Czar for approval before they can be enforced; (4) the committee of ministers,³ who communicate directly with the Czar. During May, 1888, a special imperial cabinet was created; it has administrative (economical, agricultural and manufacturing) and legislative sections. For administrative purposes the Empire is divided into general governments, governments, and districts; in European Russia there are 68 governments and 635 districts; in Asiatic Russia, 14 governments and 173 districts. Each general government has its governor-general, who represents the Czar and controls both civil and military affairs. A civil governor and a council of control in each government, and a military governor in frontier provinces, assist in the management of local administrative affairs. In most of European Russia and to

¹ Prepared by Miss Frances Graham French, specialist in school systems of North-arn and Eastern Europe.

² Procurator of the Holy Synod, M. Pobiedonostzew.

³ Minister of Public Instruction, Count Delianow.

some extent in Siberia, a system of communal self-government prevails, the primary unit of organization being the "mir," or village community. There are 107,493 of these communities in European Russia. The affairs of the mir are discussed and regulated in general assembly of all the heads of families. Each mir elects its own elder, who is its executive, but who has no authority except to carry out its decisions. The communes are united into cantons (*voloste*) which have an average of about 2,000 men each (in European Russia 9,533). Each canton is presided over by an elder elected at the cantonal assembly, which assembly is composed of the delegates of the village community in the proportion of one member to ten households. In Poland these assemblies are composed of all landholders, nobility included, police and clergy excluded.

The economical affairs of government and district are administered to a certain extent by governmental and district assemblies—the so-called *Zemstvos*—which are composed of representatives elected by the peasants, the householders in towns, and the landed proprietors. The *Zemstvo* supplements the acts of the rural community. It dates from 1867, and was in force in 361 districts of 34 governments in 1886. In 1890 there were important modifications introduced in these assemblies: the number of representatives was reduced, their powers were limited, while the nobility received greater authority. In cities and towns there are municipal organizations with powers similar to those of the *Zemstvo*.

Social distinctions are most marked in Russia; the nobility, the clergy, the merchants, and the peasants do not mingle together, but each class isolates itself in a measure from every other class, and each has its own educational institutions. Of the total population only 79.89 per cent are Russians; 8.11 per cent belong to the Aryan races; 2.67 per cent to the Semitic races; 9.17 per cent to the Finnish and Tartar groups; 0.16 per cent to other races. The established religion is Græco-Russian, but all these races with different degrees of civilization have not adopted the same cult. The majority of the inhabitants in 1886 were orthodox-Catholics—the official title for the Græco-Russian faith. The different religions were represented by the following numbers: Orthodox-Catholics, 65,549,096; United Church and Armenians, 55,000; the Roman Catholics, 8,300,000; Protestants, 2,950,000; Jews, 3,000,000; Mohammedans, 2,600,000; Pagans, 26,000; these estimates not including members of the army and navy.

The vast extent of the Czar's dominions, the diversity of nationalities and religions, plainly indicate the difficulties attendant upon the establishment of an acceptable school system; and yet, notwithstanding the many different elements which combine to make up this great Empire, there is national as well as local effort to educate the people according to the needs of the different classes and according to the different conditions of life among the peasantry, the commercial and sacerdotal classes, and the landed proprietors and nobility.

THE SCHOOL SYSTEM.

ESTABLISHMENT.

The empire is divided for educational purposes into twelve circuits, which are, through their curators,¹ under the direct charge of the ministry of education, although there are many special schools which depend upon the other administrative departments.

The school system throughout all its ramifications is an establishment of the State, for although the authorities at St. Petersburg do not establish all schools, they are cognizant of the plans adopted by the local authorities in regard to school organization. The educational system is based upon a general plan which received imperial sanction in 1862, and which received still greater force by an edict of May 25, 1874. According to these imperial edicts each parish is to have a school, and in cities there is to be a school for every 1,000 inhabitants, as about 50 children between 8 and 10 years of age are found in that number of people. Education is compulsory in many provinces, except when the distance is too great or the weather too bad, but latitude is left to the zemstvos in determining the age at which children are required to attend school. Under elementary instruction are included (1) the people's schools (*narodnoe-uchilis-ché*) divided into parish and district schools, the first under the care of the State and intended for the young children of the people; (2) the district schools (*uyezdnoé-uchilis-ché*) which are of higher elementary grade, one for each administrative district. These higher elementary grades are now fast being replaced by urban schools. All children are admitted to the elementary schools without distinction of creed or social conditions. If funds are lacking for separate schools for girls they may attend the boys' schools. The authorities having the controlling influence over the schools may make them gratuitous or may require tuition fees.

Below the elementary grades are infant and maternal schools, in which children between 3 and 10 years of age are received by the day. There are also asylums for orphans from 7 to 12 years of age in the large cities, especially in St. Petersburg and Moscow. Froebellian methods are employed in some of the maternal schools and asylums.

Generally speaking, education in the elementary grades is gratuitous, not only in point of instruction but also as far as the purchase of text-books and school material is concerned. If the authorities decide to establish a school the zemstyo usually obtains certain State subsidies to aid in carrying it on. Schools differ greatly in different localities; but, in general, rural schools have only one class, with one or possibly two teachers, while city schools may have six classes, giving the pupil a higher grade of elementary instruction than is given in the rural

¹The curator is a prominent citizen who acts as an intermediary between the local school officer and the ministry.

school. Pupils of the urban schools are fitted to enter the service of the Government without further examination. Those who have followed four years of the course are prepared to enter the gymnasia. The most frequented schools are those in charge of the zemstvos; next, those in charge of the commune, then those under direct control of the ministry of public instruction.

Private schools may be established, if authorized by the school authorities, but they reserve the right to close them if there is anything objectionable in their management. The individuals or communities which establish private schools indicate to the local school authorities what funds they intend to use for such purpose and the authorities designate a person to administer such funds.

In elementary grades the instruction of young girls is somewhat neglected, especially in rural districts. Protestants and Jews are most anxious to give their daughters an education in the different grades of society. The clergy take the first rank in point of educating their daughters; the merchants and citizens generally come next, and lastly the peasants. Elementary education for girls of higher classes is generally given at home; secondary grade instruction in institutes which are maintained by the Government, admission being granted according to the rank and official position of the father of the family.

Grouped under elementary grades are the Sunday schools for adults, and, in localities where it is impossible to reach the permanent schools, ambulatory schools are found which, as in Scandinavia, are moved to other places after a few weeks' instruction. If the pupils are not numerous, the children of both sexes are instructed together; when the number of pupils is large two school divisions are formed, the boys coming from 9 to 12 o'clock, the girls from 1 to 3 or 4 o'clock. In the territorial divisions which have a zemstvo, the schools are well looked after, but in other parts of Russia complaint is made of unsuitable buildings, lack of proper facilities for teaching, etc.

The schools of the clergy, a class of schools entirely apart from the State elementary and secondary grades, rank well in point of attendance. These schools are free to the orthodox Catholics, but tuition fees are charged to those of other faiths. The State elementary schools are open to all classes, but the people of birth and means prefer to have tutors and governesses at home, this being quite a popular phase of education in Russia.

The State and the highest authorities are much interested in the establishment of technical and industrial schools,¹ the instruction to run in lines parallel to the secondary and primary grades. A special division to take charge of these schools was created in 1883 in the ministry of public instruction. The intermediate technical schools have

¹A comprehensive statement in regard to technical and industrial schools is found in the citations from M. Anopoff's book and in the Report of the Technical Congress, which appear as an addendum to this article.

from six to eight-year courses, and train the students in such knowledge of technical and commercial matters as is necessary to those who are to become assistants to engineers and to directors of industrial enterprises of minor importance. The schools of technical education, so called, are attended by students who graduate from the elementary schools, and who aim to become skillful workmen in manufacturing establishments, mechanics, and designers. In this group are the schools of railroads, under the control of the ministry of public works and railways. Finally, the lower technical schools have a general plan of instruction which, in literary matters, does not go beyond that of elementary schools, and in addition aims to form artisans for domestic and village industries. To these regularly organized schools are joined special schools for adults—overseers, foremen, contractors, mechanics, and printers—the classes for evenings and Sundays of the Technical Society of St. Petersburg, and the industrial school of Riga. Finally, the majority of schools of the districts and the urban schools have subsidies for technical sections, \$241,250 having been added to the budget of 1891 for the inauguration of that branch of instruction; a considerable portion of that sum being reserved, however, for the establishment of a technical division in district schools in villages where there are village industries. A scheme for technical schools was elaborated in 1888 and one for commercial industrial schools in 1889.

Ranking numerically next among the governmental schools are the secondary schools (gymnasia, progymnasia, and Real schools), which are supported by State, city, zemstvo, private individuals, or by tuition fees. The gymnasia date from the reign of Catherine II (1762–96). A decree of 1804 converted most of the communal schools founded in Catherine's reign into gymnasia; yet in reality secondary education was not regularly organized until the decree of December 8, 1828, was promulgated. This decree was an outcome of a report made by a commission appointed on December 14, 1825, by Nicholas I, the aim of the commission being the formation of a classical course, without Greek as an obligatory study. In order to enforce this idea it was decided (1) that those who studied Greek should obtain admittance into the fourteenth grade of the hierarchic¹ scale established by Peter the Great in 1712; (2) that the entrance to the university at governmental expense should only be accorded to pupils who distinguished themselves in the study of Greek; (3) that knowledge of the language should be required of those seeking the degree of doctor. The statutes of 1828 contained the two last requirements, and added that those who

¹ This hierarchy comprised 14 classes of civilians, corresponding to 14 grades of military functionaries. A privy councillor held the first place, an actual privy councillor the second place, and so down through college secretaries to archivists and registrars. The members of these 14 classes are called *tschinorniks*, the first three classes have the title Highest Excellence, the fourth Excellence, from that to the eighth *vyekorodnii* or the hereditary nobility and the remainder the title *blagorodni*, or well born.

distinguished themselves in the study of Greek should receive medals of gold or silver. This commission brought about a complete organization of the gymnasia and aimed to give a very complete secondary education to those who did not wish to, or could not, finish their studies at the university.

In 1849, instead of creating special schools, it was deemed advisable to make the studies of the gymnasia more practical, and in 1852 to add a course of natural sciences and mathematics, but the outcome of these innovations served to bring about a decadence in education in general, as in the universities, ecclesiastical academies, and gymnasia it was difficult to find professors who could take charge of the various divisions of study. In 1864 a new plan was inaugurated in the secondary schools. This made the ancient languages the basis of admittance to the university, elevated the standard of appointment of teachers, inspectors, and directors, abolished the division of higher and lower grade masters (who ranked according to subjects taught), arranged salaries according to hours of instruction, limited the number of pupils in each class to 40, and prohibited the promotion of those who, after spending two years in a class, were not prepared for it. The statute also extended the duties of educational councils, associated directors and inspectors together, and brought the teachers and pupils more *en rapport* with each other. Authority was also given to form the four lower classes into progymnasia. While these reforms were important they were not the means of definitely organizing classical instruction, for new regulations, which are still in force, were drawn up in 1869 and modified in 1871. According to these regulations each government is to have one or more gymnasia in each important town or city where there seems to be need of such schools, these institutions to be exempted from taxation, to give general instruction above the elementary grade, and to act as preparatory schools for the universities and other special schools. The present regulation gives less time to the study of history, geography, and the Russian language, but more time to the classics.

The gymnasia and progymnasia, founded according to the explicit directions of the minister of public instruction, are under the immediate jurisdiction of the curator of the school district. The expenditures are to be paid by the State, certain societies, corporations, and private individuals. In the Baltic provinces, by law of April 24, 1890, many secondary schools were transformed to suit the plan of the Russian gymnasia. This is in accordance with a plan to more thoroughly Russianize these provinces, for hitherto the German influence has been particularly strong. This change and certain regulations as to the free exercise of the Protestant religion have caused much discontent, as have also the measures to limit the German methods and language in Dorpat University.

The Realschools, organized by imperial decree of May 12, 1872, aim to afford young men an education capable of immediate application, and to prepare them for the higher professional schools. This

preparation is brought about by devoting more time and attention to the study of the mother tongue, mathematics, and natural sciences than in the classical schools. But on account of the general theoretical tone given to these branches a supplementary class has been formed for the giving of more practical instruction. These schools have been found to be of such practical¹ use that there is hardly an important town of Russia, Siberia, or Caucasus which is without its Realschool. The need of both technical and Realschools is felt throughout Russia, as the natural resources of the country are in a measure awaiting development, and to the graduate of the Realschool and of the technical school, belongs this field of labor. In 1881 the zemstvos requested the admission of the Real students to the scientific faculties of the universities, and a commission was appointed to further this matter; but this plan was never carried out. Throughout the Empire the desire for secondary instruction is so great that excessive crowding is observable everywhere.

The Russian authorities show marked interest in the education of young women. The institutions for the secondary education of girls were up to the middle of this century quite exclusively reserved for daughters of noble families. The Empress Catharine founded, in 1764, in the Convent of the Resurrection in St. Petersburg, a school for the education of young girls between 16 and 18 years of age, from the nobility and middle classes. The courses were gratuitous and extended through a five-years-period. The widow of Paul I, Maria Feodorovna, also carried out this same idea, but the majority of the schools were only instituted for the daughters of noblemen. During the reign of Alexander II the Empress Maria Alexandrovna specially organized educational institutions for the middle classes, and the first gymnasia for girls were opened in Russia in 1858. These institutions were all for day pupils, so that pupils could have the advantage of being with their families and yet receive a complete education. The Empress was patroness of these schools and the curator of the school district had immediate jurisdiction over them. Each gymnasium had two councils, one an administrative, the other a pedagogical council. The directress of the gymnasium was appointed by the curators, and that appointment was confirmed by the minister of public instruction. The council of administration, composed of persons of both sexes chosen by the corporations and societies which support the schools, had for its duties—(1) to choose a curatrice and directress, (2) to examine as to the requisite resources, (3) to watch over the budget of expenditures, (4) to regulate the employ of amounts allowed to the school, (5) to limit the tuition fees, which should be less in the progymnasia than in the gymnasia, (6) to indicate when there should be exemption from school fees, (7) to decide as to the aid to be given to meritorious but needy students, and (8) to

¹It is stated, however, that the number of studies required produces a certain superficiality among the students, so that they do not find steady employment after graduation.

have the general charge of the institution. The pedagogical council (composed of the director of the boys' gymnasium or Real school, the directress and all other officials of the girls' school) chooses the teachers, both the men and women, and it is left to the curators of the school districts to confirm them in their functions. In the three classes of the progymnasium and the three lower classes of the gymnasium the instruction is given by women teachers.

A large number of girls are trained in the state institutions, of which there are 8 at St. Petersburg and 6 at Moscow, and 20 in different provincial towns. Admission to these is dependent upon the rank and official position of the father: In one the highest aristocracy are admitted, and so on down to the daughters of the clergy and of citizens. The duration of the studies is six years. Other establishments for young women, also under the supervision of the minister of public instruction, are open to all young girls, irrespective of rank. They are, with the exception of certain modifications in the instruction, completely parallel to the establishment for boys.

For the training of teachers permission was given by the authorities in 1871 to establish a class of training schools, so that persons desiring to adopt that profession might be properly instructed in their duties. These schools are divided into institutes and pedagogical seminaries. The former train teachers for the higher, the latter for the lower elementary grades. There are also pedagogical training schools for teachers of infant and maternal schools, which will be described under appropriate headings.

The universities are of comparatively recent origin, dating from the 18th and 19th centuries. Their first real vitality was due to Alexander I (1801-1825), who greatly favored the establishment of institutions for higher study, and, indeed, himself founded the universities of Kharkof, Kazan, and St. Petersburg, and restored those of Dorpat and Helsingfors, all of which have a high standard of instruction. The complete university is composed of four faculties: History and philosophy, physical sciences and mathematics, law, and medicine. All the universities do not possess the full faculties. The universities of St. Petersburg, Moscow, Kief, Kharkof, Odessa, and Kazan rank about equally in this matter. Dorpat has been under German influence, but is now being Russianized. Helsingfors has a special constitution of its own. Varsovia is a Catholic center, and at Tomsk,¹ in northwestern Siberia, an in-

¹ Students of the Jewish religion are admitted to the Imperial University at Tomsk (circular of rector of the university of June 3, 1892) in such a proportion that their numbers do not exceed 5 per cent of the students. Preference is given to those who have completed a gymnasial course in Siberia. In the University of St. Petersburg only 3 per cent of the students are to be Jews, by regulation made in the year 1890-91. In the schools throughout the Empire 10 per cent of the pupils may be Jews, or 5 per cent where they are not considered as permanent settlers. In large cities like Moscow and St. Petersburg about 3 per cent are admitted to the public schools. The Jewish people have, however, their own schools, wherein their children show themselves to be studious and intelligent.

cipient university, which now consists only of the faculty of medicine,¹ was opened in 1889.

Classed under higher instruction are a few lyceums, which are a grade above the gymnasia but of a lesser degree than the university. Information in regard to these schools is presented under the heading "Courses of study." Special schools, most of which are establishments of the State, such as polytechnic schools, forestry schools, schools for veterinary surgery, for the study of mining, bridge and road making, serve to complete a school system which leaves no grade of education untouched. Military schools also have an important part in the school system. The pupils enter at 10 years of age into one of the one hundred or more military schools in the Empire, follow a seven years' course, which is free of charge to most of them, and are then ready to enter for a two or three years' course in one of the six special military schools of higher grade. The naval cadet school, dating from Peter the Great's reign, and the naval academy educate for the naval service in a six years' course in the former and a two years' course in the latter school.

STATE CONTROL.

The Czar, as stated above, has the supreme control of all legislative, executive, and judicial matters throughout the Empire, consequently he is the highest school authority. But acting as his aids are many officials who have more direct charge of educational affairs, among them the ministers, all of whom communicate directly with their sovereign, so that the control of the various grades is vested in the different ministers of the Government.

The minister of public instruction with a deputy, who takes his place in case of absence, and his scientific council, composed of well known specialists, form the highest legislative and administrative body for educational purposes. The scientific council has as one of its duties the selection of text-books, the list of which is submitted to the minister annually, and, if approved by him, is published.

The greater proportion of educational institutions are under the direction of the ministry of public instruction, but the Holy Synod has a number of people's schools of both elementary and secondary grades, which have a separate organization from the Government schools. Then there is a complete system of schools attached to the ministry of war. This class of schools includes military academies; schools of civil engineering and artillery; cadet schools and military gymnasia for the sons of officers; schools for engineers and subofficers who voluntarily enter the service and aspire to attain the rank of officer; and topographical and pyrotechnic schools. These schools are only accessible to the sons of officers and to young officers. Controlled by the same ministry are schools to form the corps of pages to which are admitted the sons and

¹At date of going to press information is obtained that the faculty of science was opened in the winter of 1892-93.

grandsons of generals only; the school of law, with a seven years' course exclusive of the preparatory classes; and the imperial lyceums of St. Petersburg and Moscow. In the first of these establishments persons are trained to be higher officers; in the second for the magistracy; in the others as administrative officers. These schools are reserved for the sons of high civil and military authorities or of noble families. Connected with the ministry of the navy and the ministry of public works and railways are many technical schools of both elementary and secondary grade. Such schools are divided into those for the nobility and for persons who are not of noble extraction. The ministry of the imperial house has charge of schools which serve to train young persons for the dramatic profession. Both special and general instruction is given to this class of students, the study of three languages, dancing, dramatic art, and singing being included in the course. Still other ministers have charge of higher and secondary schools for the children of persons employed in such ministries. The minister of public instruction is represented in each of the educational districts by a curator, who is appointed by the minister. Subordinated to the curator are the inspectors of provinces and districts designated by himself. The jurisdiction of these functionaries extends over all branches of instruction, even to the universities, and through these officials the Czar is advised as to the educational movements transpiring throughout his domains.

LOCAL CONTROL.

In each of the provinces where there is a provincial assembly or zemstvo the schools are under the control of a school council, presided over by the archbishop, of which the governor of the province is member *ex officio*. These councils are independent of the ministry and have no regular communication with the department except when complaints are made or illegal acts done. In the provinces or governments where there is no zemstvo there are neither school councils nor inspectors, but the directors of the gymnasia have, at least nominally, the surveillance of elementary grades. The Holy Synod has direct control of the parochial schools organized by law of July 13, 1884, all of which depend upon the clergy. The administrative officers of the different classes of schools will be found under the heading, "Supervision and administration." The Grand Duchy of Finland has its own special school administration (see Report of the Commissioner of Education for 1888-'89, vol. 1, pp. 222-235).

MAINTENANCE.

Russia's rule is that of absolutism, and yet the peasant class, even when its members were serfs, had a sort of republican organization. Individual rights are a new thing, however, and have only existed since the abolition of serfdom. Each commune has its own form of organization; and when a school is to be created the members of the commune assemble together as a whole and vote the funds for such purpose; that is, such a vote is taken in case there is no territorial assembly or zemstvo.

The development of elementary education is slow, and the governmental authorities at St. Petersburg only participate in a most limited degree in the formation and maintenance of schools, as they lean voluntarily upon the zemstvos and upon the municipalities and private associations scattered throughout the Empire, yet the school system has marked uniformity throughout the length and breadth of Russia, and the organization is as complete as though all educational institutions were founded and supported by the Government. As to any modifications of this general rule it may be observed that, according to an imperial decree of May 25, 1874, which sums up all previous decrees, elementary schools are to be maintained by the State (in a limited degree) by the zemstvos, by the communes, and by private associations. When the zemstvo decides to create a school, however, it expects a subsidy from the State and also pecuniary aid from the commune, both of which it usually obtains (in 1890 the zemstvos maintained no less than 22,000 schools), but the main cost of village schools is paid by the zemstvos; still, in the school district of Odessa the communes expended two and one-half times as much as the zemstvo. The Holy Synod supports a number of schools of both elementary and secondary grades, which are open to children of all religions, the Orthodox-Catholics receiving free instruction, those of other faiths paying school fees.

Secondary schools are maintained by the State, which contributes 52 per cent of the aggregate expenditure of the gymnasia, progymnasia, and technical schools; the remainder of the amount needed to maintain such schools being made up by fees (about 30 per cent) and by donations from the zemstvos and municipalities. Cossack schools, of all grades, for boys and girls are maintained by the separate voiskos, which, however, maintain a number of their pupils in the governmental schools. The State maintains institutes of a secondary character for girls. These are the so-called Empress Marie institutions, the expenditures of which are paid by the ministry of finance. The universities are maintained in part by the State and in part through the funds accruing from tuition fees, donations, etc.

Summarizing in a few words, it may be stated that the Government at St. Petersburg is thoroughly in accord with the local authorities in the matter of establishment, control, and maintenance of schools throughout the various divisions of Russia. While much is left to local authorities, yet is it noticeable that all grades of schools are in a measure subordinated to regulations emanating from the seat of Government, the Czar and his ministers being fully cognizant of all branches of the public service, and the divers school officials being either in direct or indirect communication with the central authorities.

STATISTICS.

The total number of pupils in the schools of the Empire, exclusive of Finland, was estimated, in 1887-88, to be 2,472,627—boys, 1,944,057; girls, 527,570. These figures are not complete, but it seems that only

about 2 per cent of the aggregate population is in school, and, in 1888, only 20 per cent of the recruits could read and write. In European Russia there is one primary school for each 2,500 inhabitants, and in Siberia one for each 3,345 inhabitants. The statistics of the different grades of schools, as far as presented in the year 1887, are as follows:

ELEMENTARY EDUCATION.

	No. of schools.	Boys.	Girls.
<i>Ministry of public instruction.</i>			
District schools	181	13,857	.....
Town schools	442	52,217	.....
Elementary schools	24,329	1,219,663	<i>a</i> 339,514
<i>Holy synod.</i>			
Boys' schools	181	31,593	.....
Girls' schools	53	.....	9,474
Parish schools	15,471	408,721	.....
Schools for indigenes	3,415	52,681	10,325
Miscellaneous schools	35	1,526	793
<i>Jewish schools.</i>			
State schools	77	4,188	1,063
Private and communal	1,165	17,279	5,686
Primary schools under the military	22	993	43
<i>Cossack schools.</i>			
Boys' schools	1,280	52,343	.....
Girls' schools	236	.....	16,338
Total elementary education	646,880	6,451,609	383,236
		408,721	

a Figures for Darpat educational district wanting.

b This office has no means of ascertaining discrepancy between the sum of the several items and the totals printed beneath them.

SECONDARY, HIGHER, AND PROFESSIONAL EDUCATION.

	Schools.	Teachers.	Students.
Normal schools	78	822	5,586
Normal seminaries with practice schools			
Gymnasias and progymnasias	239	2,815	68,682
Realschools	90	1,403	18,827
Technical and industrial schools	44	.....	4,760
Theological seminaries	55	1,049	17,297
Military and naval schools	113	.....	21,109
Total secondary schools for boys	622	.....	136,270
Gymnasias and progymnasias for girls	343	.....	70,174
Institutes for girls	30	.....	7,911
Total secondary schools for girls	373	.....	78,085
Universities	9	3,753	13,033
Special high schools	10	190	2,096
Women's university colleges (1890) <i>a</i>	1	.....	400
Theological schools	4	127	831
Medical academy	1	.....	745
Military academies	4	.....	431
Agricultural schools	1	.....	306
Engineering schools	1	.....	238
Total higher institutions (incomplete)	31	.....	18,080

a The women's colleges providing full university education were closed by Imperial order in 1887-88. One of them has since been reopened at St. Petersburg.

Within a few years a certain extension has been given to the schools carried on by the clergy, the teachers being permitted to teach through *lettres d'obédience* given by the bishops; these schools numbered 19,508 in 1890, with nearly 600,000 pupils.

In Caucasus in 1888 there were 19 lyceums, gymnasia, and Realschools; 5 normal schools, 16 high schools for girls, with a total of 10,056 pupils (6,036 boys, 4,020 girls); 31 town schools, 9 special schools, 5 schools for indigenes, with a total of 6,660 pupils; 104 private schools, with 3,813 pupils; 876 primary schools, with 51,529 pupils; 151 Armenian schools, with 11,129 pupils; 395 schools of varied character, with 18,335 pupils; 2,046 Musselman and Jewish schools, with 24,750 pupils.

In Siberia there were 1,446 elementary schools, with 49,118 pupils.

The statistics of schools in the capital, St. Petersburg, at date of May 30, 1890, were as follows :

	Number of schools.	Pupils.	
		Boys.	Girls.
<i>Municipal elementary schools.</i>			
Schools for boys	149	7, 177	.....
Schools for girls	110	.....	5, 583
Industrial schools	2	38	53
Dominical schools	8	261	212
<i>Schools maintained by the different denominations, communities, etc.</i>			
Roman Catholic schools	5	249	323
Lutheran schools	11	2, 021	824
Reformed Church schools	3	784	.....
Swedish and Finnish schools	3	216	302
Esthnian and Lithuanian schools	2	116	111
Jewish schools	5	307	151
<i>Private schools.</i>			
Schools for boys	12	1, 241	.....
Schools for girls	24	.....	1, 952
Infant schools (including 26 kindergärten)	130	1, 557	1, 744
<i>Secondary Schools.</i>			
Schools for boys	35	7, 852	.....
Schools for girls	33	.....	7, 397
Schools for both sexes	16	1, 220	891
Military schools	13	3, 261	.....
Schools annexed to different asylums	78	3, 281	2, 875
Institutions for the deaf, dumb, and blind .....	.....	147	89
<i>Higher grade schools.</i>			
Burgher schools for general studies	4	3, 023	.....
Burgher schools for special studies	5	1, 830	.....
Military schools	6	1, 258	.....
Academy of fine arts	1	479	34
Conservatory of music	1	288	399
Pedagogical and scientific courses	2	.....	1, 079
<i>Total.</i>			
High schools	19	6, 878	1, 512
Intermediate or secondary grade schools	175	15, 761	11, 252
Infant schools	130	1, 557	1, 744
Private schools	36	1, 241	1, 952
Schools of different foreign cults	29	3, 693	1, 711
Municipal schools	269	7, 476	5, 848
Total	653	36, 606	24, 019

The length of school year is not specified for the schools of elementary grade, but a general statement is made that the common schools are never closed, except for the summer holidays, *i. e.*, from May 25 to August 20, on Sundays and other public holidays. It was also resolved at the congress for technical and industrial instruction, held in St. Petersburg in 1891, "that tuition shall go on during at least ten months in the year." This would naturally mean a continuance of all schools in which there is to be technical training during all but two months of the year. In the secondary schools, or gymnasia, the school term is from August 16, or thereabouts, to about the middle of June. The holidays include a fortnight at Christmastide, the same at Easter, sixteen church holidays, and Sundays.

The ages of pupils throughout the different grades of schools are not definitely stated, but the city schools are, generally speaking, for pupils between 7 and 12 years of age. The same limit of age is noticeable in the asylums; in the maternal schools children enter as early as 3 years of age. At 10 years boys are presumed to be prepared for the gymnasia, and from 10 to 11 years of age girls enter the institutes. In the military schools instruction commences with the tenth year. The gymnasial student is supposed to be prepared for entrance into the university at 18 years of age.

FINANCE.

INCOME.

The income for educational purposes is derived from governmental subsidies, provincial and communal funds, which are made up in part from proportionate taxes upon personal property, and from an income tax. In the communes the taxes are levied by the communal authorities according to estimates presented to the higher authorities. To this may be added a supplementary tax of 10 per cent to form a provincial school fund. The village schools only figure for a comparatively small amount in the governmental budget, as the different local authorities are presumed to raise a sufficient income for the proper maintenance of such schools. The communal societies of towns or villages establish schools without government subsidy. City or village societies which desire to establish peoples' schools engage themselves, either by municipal or communal decision, to guarantee the existence of such schools. Private individuals can also open schools if they will observe the conditions¹ upon which such schools are usually established, a simple declaration to the authorities being all that is at first requisite.

The funds for the secondary schools are contributed by the state to the amount of 52 per cent of the aggregate expenditure for the gymnasia, progymnasia, and technical schools, the remainder being made up by fees (about 30 per cent) and by grants from the zemstvos, the municipalities, etc. The Cossack schools, both for boys and girls, are

¹For supervision and programs of these schools see pp. 211, 227, and 230.

maintained by the separate voiskos. The school funds of the voiskos in 1888 were 2,720,123 rubles (\$1,582,231). The church contributed the sum of 725,252 rubles (\$419,195) in 1887 and 1,645,681 rubles (\$951,203) in 1888.

The governmental authorities being desirous of attracting students to the university give at least \$138,500 annually as scholarships, donations to needy students, and general aid where most needed. This amount is often increased to about \$279,000 from other sources. The budget of the ministry of public instruction contributes about 3,500,000 rubles, or \$1,953,000 annually for the universities. In order to develop the technical schools, especially that division of district and urban schools which tends to instruct in village industries, the Government added a fund of \$64,818 to the budget for 1891, but a considerable portion of that sum was set aside for the industrial division of district schools.

EXPENDITURE.

The expenditures of the Government for education are not explicitly given for a late date; the actual ordinary expenditure included in the budget of the ministry of public instruction in 1891 was 22,935,781 rubles, or \$12,798,165. The aggregate expenses of the zemstvos in 1887 was 44,131,775 rubles (\$24,669,530), of which 17 per cent was spent for education, *i. e.*, \$4,193,810. The latest expenditures which can be given in detail, and which serve to show how the funds of the different ministries and the Holy Synod are expended for educational purposes, may be more clearly understood by the following presentation for the year 1885:

	Rubles.	Dollars.
Administration and supervision.....	970,537	539,759
Universities.....	2,906,380	1,621,760
Demidoff Lyceum (law school).....	48,674	27,159
Secondary education.....	6,081,298	3,393,364
Realschools.....	1,990,244	1,100,556
City schools.....	1,543,149	861,077
District and other schools.....	340,977	199,285
Subsidies to people's schools.....	1,733,278	967,169
Historical-philological institute.....	251,720	140,459
Pedagogical institutes and seminaries.....	1,260,822	703,588
Educational establishments connected with the ministry.....	657,838	367,073
Buildings.....	772,066	408,812
Prizes and awards.....	304,170	169,726
Scholarships and aids to students.....	835,651	466,293
Academies, publications, etc.....	922,721	513,278
Total.....	22,019,963	11,394,339
Expenditures of the Holy Synod for its schools.....	2,645,683	1,476,291
Minister of war.....	7,012,144	3,907,276
Minister of navy.....	526,838	293,975
Minister of finances.....	2,977,825	1,611,626
Minister of the state domains.....	1,119,463	624,644
Minister of the interior.....	82,082	45,801
Minister of public works and railways.....	142,458	79,491
Minister of justice.....	431,656	240,864
Minister of foreign affairs.....	15,141	8,448
The directorship of the royal stud.....	11,900	6,640
Total of various ministries.....	23,953,380	12,785,986

^a These totals do not agree with the summarization of the items given above, but there is no means of knowing wherein the variance lies.

It will be observed that the ministry of public instruction only expends about 4,500,000 rubles more for education than do all the other departments together for such purpose. Of the amount paid out for education the Government only accords to the village schools a subsidy of about 14 per cent of the whole amount. The state maintains only one school for 9,078 inhabitants in the provinces where there is no zemstvo, one for 46,555 inhabitants in those provinces which have a zemstvo, and one for 163,116 inhabitants in the Baltic provinces, so that it will easily be understood that the zemstvos, or provincial assemblies, have the principal maintenance of the public schools. The average expenditures of the zemstvos is 65.5 per cent. of the whole amount expended on the schools, but these expenditures increase from year to year. The governments where there is no zemstvo furnish about 69 per cent of the total funds for education.

SUPERVISION AND ADMINISTRATION.

STATE SUPERVISION.

The educational institutions of Russia are under both state and local control. The supreme control is vested in the Czar, who, by means of the information imparted to him by his cabinet¹ and other officials having schools under their charge, and by means of the functionaries who report to the minister of public instruction, is able to extend his knowledge to all branches of the school system throughout the Empire. The ministry of public instruction, which is the central authority for the greater proportion of schools is divided into three sections—administration, education, and learned societies. The second section, with which this account alone deals, is presided over by the minister or in case of his absence by an official who acts as his deputy. A scientific council acts as aid to the minister; its duties include the final adjustment of questions pertaining to elementary instruction, the giving of advice in regard to text-books, and the publishing of an annual list of books authorized by the minister. These books are of two kinds—manuals, employed ordinarily, and auxiliary works, which teachers may need from time to time. Connected with the ministry is a commission charged with the examination of candidates of both sexes who may be desirous of obtaining a diploma giving them the right to teach without having passed through the training schools, graduation from which gives such right. Since 1883 a special division for technical and industrial schools has been created in this ministry.

The twelve educational circuits into which the Empire is divided, *i. e.*, St. Petersburg, Moscow, Dorpat, Kief, Varsovia, Kazan, Kharkof, Vilna, Odessa, Caucasus, Orenburg and western Siberia, have each a curator in charge, who is appointed by the minister of public instruction. The curator is assisted by one or more provincial or district inspectors, whom he appoints as his aids. In St. Petersburg there are

¹For the other ministers having charge of educational institutions see *Control*.

four inspectors, each in charge of a separate class of schools. Each educational circuit may include several provinces. The curator has general supervision of city schools and of normal schools, even appointing the directors of the latter. The jurisdiction of the curator and governmental inspector extends over all educational institutions of the circuit, even to the universities. Since 1885 the inspector is vested with a part of the rights which were formerly held by the rector of the university. The inspectors are required to visit public and private educational institutions quite frequently and to furnish reports of their observations. Such functions are not to be conferred upon the clergy.

LOCAL SUPERVISION.

In each of the provinces where there is a provincial assembly, or *zemstvo*, the schools are under the charge of school councils presided over by the archbishop, and of which council the governor of the district is a member. These councils do not report directly to the minister except in such extreme case as an illegal act. In the provinces where there is no *zemstvo* there are neither school councils nor inspectors. In such case the directors of the gymnasia have general control of the schools. The school council of the district—there are from five to twelve districts in a province—is composed of two members of the district administrative council and of representatives of societies which have founded schools or are patrons of schools. The members are appointed by the minister of public instruction, by the orthodox ecclesiastical authorities, and by the provincial school council. The district council¹ looks after primary education, its members visiting the schools; encourages the establishing of new schools and the amelioration of the condition of those which exist; attends to the furnishing of school material; proposes to the provincial council that certain schools be suspended if they are prejudicial to the public welfare; delivers certificates to teachers, both men and women, and indicates which members of the teaching force should be recompensed or promoted; furnishes annual reports of the schools of the district to the provincial school councils, and through them to still higher educational authorities.

The provincial school council is composed of the head of the diocese, the president, the governor, the school director, and two members of the administrative provincial council. The curator of the educational circuit takes part at the session of the council.² The provincial school council exercises a higher grade of supervision than the district council.

¹ It is stated (see Russia under the Czars) that on June 12, 1884, a law was passed which abolished school councils and transferred all their powers to the bishops and their nominees among the clergy, but as this system of school councils was in vogue for years, and as references are sometimes made to such councils in different parts of the Empire, it is surmised that the council may still exist in certain localities, and hence its duties are here inserted.

² Other statements give the fullest control of school matters to the curator and place the council in the position of an advisory council only.

It examines the reports of the district council and gives its decisions upon mooted questions, indicates what teachers merit subsidies from the Government, appoints such school patrons as it deems fit to hold a position on the district school council, and holds its reunions whenever affairs require it.

The parochial schools established by the orthodox clergy by decree of June 14, 1864, are under the jurisdiction of school councils, even as were the elementary grades. But as the reports concerning such schools were presented to the Holy Synod by the diocesan authorities, it was decided by decree of April 3, 1870, that all reports concerning both parochial and general elementary schools should be addressed exclusively to the minister of public instruction. A reorganization, however, of the parochial schools (by law of July 13, 1884) placed these schools under direct control of the Holy Synod, which forms its own programme, with religion as a basis of instruction.

Each city school is placed under the direct control of a surveillant or inspector appointed for three years by the general inspectors, or by the zemstvo, or by the municipality if either of the last-mentioned authorities maintains the school. The school director takes the title of inspector if there are three or more classes connected with the school. The personnel of the school forms, with the director as presiding officer, a pedagogical council, which holds meetings at least once a month.

Each institution for secondary education has a director or directress in charge, and several inspectors or inspectresses. The directresses of institutes are sometimes persons who are not educators, but, if directors and directresses of gymnasia, they must belong to the teaching profession. In the institutes and gymnasia for girls there are the so-called *dames de classe*, each one of whom for a 24-hours period looks after the discipline and good order of the pupils. These ladies are chosen from persons of different nationalities, so that each may converse with the pupils in her native tongue. They attend the lessons given by the teachers, see that the tasks of each pupil are correctly performed, and the teachers' exposition understood. In the secondary schools for boys similar positions are held by so-called governors. The governor and *dames de classe* take charge of the lowest class on its entrance into the school and continue with it to the close of the school course. The directors, inspectors, teachers, governors, etc., unite together whenever there is any question appertaining to their special institutions to be decided. At the end of the year the higher school authorities are requested to be present at the closing ceremonies of the school when awards are made to those worthy of such recompense. A special division of the ministry of public instruction has charge of professional and technical schools, which schools have courses parallel to secondary and elementary grades.

A law of August 23, 1884, changed the supervision and administration of the universities. Prior to that date the rectors were elected by

the professors, and the dean of each faculty by its colleagues. The rector is now appointed by the Czar, the deans by the minister. When a chair becomes vacant the minister fills it either by choosing an incumbent himself or by authorizing the university to designate a candidate and to propose his confirmation. The university council has jurisdiction over any infringement of the rules by the students; it confers degrees, distributes prizes, regulates programmes, etc. The curator delegates a person to act as inspector of the university of his educational district, and designates certain assistants to act as his aids. Such is the system of supervision throughout the Russian dominions. The complaint is often made that there is too much authority, for, in addition to the numerous officials mentioned above, there are also many petty officials who report the slightest infringement to the nearest educational officer, and he in turn draws up a statement to be sent to the central authorities.

TEACHERS.

PREPARATION.

In order to prepare persons to undertake the proper instruction of children, Catherine II created, in 1783, a people's higher school, which was soon after converted into a teachers' seminary, and which from 1786 to 1801 trained about 425 teachers for such purpose. Reorganized in 1803 under the name of gymnasia for teachers, it was attached to the central pedagogical institute in St. Petersburg. This plan was, however, not successful, and in 1828 a training school for teachers of the Baltic provinces was established under governmental auspices, and in 1864 a second school for the northwest provinces was established at Molodetchno in the government of Vilna. In other parts of the Empire pedagogical courses were considered sufficient preparation for teachers until in 1869, when a third training school was opened at Kief, and a fourth at Riga in 1870. Since 1871 persons who are to become teachers in elementary grades are generally instructed in pedagogical institutes or pedagogical seminaries, which last are nonreligious in character, and, in fact, so neglect religion that the minister of public instruction proposes to bring about a reform in this matter. In the pedagogical institutes teachers are trained for the higher elementary grades. The students consist of persons who are at least 16 years of age, and who have been successful in their studies in the elementary grades, and have spent one year acting as assistant teacher. The course of study in the institutes is of three years, and graduates therefrom hold a tenth rank in the civil hierarchy.¹ Such institutes are found in St. Petersburg, Moscow, Glonkhov, Vilna, Theodosia, Jitomir, Tiflis, Kazan, Bielgorod, and Orenburg. A diploma from a training school is obligatory for persons who desire to teach in city schools. The pedagogical seminaries are for the preparation of teachers for the lower elementary grades. They admit persons from 18 to 22 years of

¹ Described in page 199.

age who are exempt from military service. Those who receive state subsidies to aid them through the course are pledged to serve at least four years as teachers in elementary grades. There are eighty-nine of these seminaries in towns of second and third rank, and even in villages in different parts of Russia.

In Moscow there is also a pedagogical seminary for girls, of at least 15 years of age, who are familiar with the elementary branches. The course is of four years, at the end of which they are prepared to teach in the higher elementary schools. Many of the women teachers in elementary grades are graduated from secondary schools. In St. Petersburg and Moscow there are also training schools for teachers of infant and maternal schools. There are no special institutions preparing persons to hold professorships in the higher educational institutions. The professors in these institutes must all have degrees accorded to them in the universities where they must have passed through the different phases of student, candidate, magister, and doctor, according as they have fulfilled required conditions and duly discussed written theses. There are numerous institutions for persons desiring to become teachers in secondary grade schools. They are generally private boarding schools, the students of which receive a small subsidy for the payment of expenses.

These conditions require that they agree to serve the state by teaching for four, five, or six years, according to the amount which they have received from the government funds. Connected with the ministry of war are similar institutions for training, with three-year courses; connected with the ministry of the interior are such schools for the study of Oriental languages. The Historico-Philological Institute of St. Petersburg, opened in 1867, makes a specialty of thorough study in the classics, and in a four-years' course trains teachers in the Slavonic and ancient languages and literature. To enter this institute the completion of gymnasial studies is requisite; its students are preparing themselves to teach in the secondary schools, *i. e.*, gymnasia, progymnasia, and real schools. Pedagogical courses at St. Petersburg, of three years in duration (which include the history of the literature of three languages) train young women as teachers, in reality reviewing the studies which they have had in secondary schools (institutes or gymnasia). These courses are for day pupils and the students have opportunities for practice-teaching. French classes are also formed in the provinces for those who wish to make a specialty of French instruction. Young women are admitted who have obtained the highest awards in the provincial institutes. Instruction is given in French in a two-years' course, and the students agree to give six years' service as teachers provided they do not marry in the meantime. The title of professor is given only to teachers connected with the universities, with the academies of fine arts, etc. In the universities there are also *privat docenten*, who receive pay from the State, and tutors who teach modern languages and liter-

ature. In the elementary and secondary grades of schools the title of teacher, *outchiteli*, is the only one given.

Teachers' institutes, or pedagogical conferences, occur periodically, and the teachers gather together for the exchange of thought respecting methods of instruction, questions of pedagogy and discipline, and the discussions also pertain to instruction in language, arithmetic, natural history, singing, drawing, choice of best books, and the most efficacious methods of instruction to be employed throughout the school course. Papers are read by those present, and especially by the women teachers from elementary schools. The Russian Government endeavors in every way to facilitate the holding of these conferences. As far back as 1872 such conferences were held, with the consent of the minister of public instruction, in forty-seven divisions of the different governments, under the direction of thoroughly trained pedagogues; who in turn were supervised by the inspectors of elementary schools; the expenses of such institutes were borne by the provinces.

EXAMINATIONS.

A commission connected with the ministry of public instruction has the charge of examining candidates of both sexes who desire to obtain permission to teach without being graduates of training schools. In order to be admitted to teach in the governmental schools a diploma is requisite. Of the two kinds of diplomas the one entitles to give lessons in private schools, the other in public schools. The first is generally a certificate given at close of the courses for young women who have been successful in passing the final examination. The other is only given by the commission appointed for examination of persons desiring to teach. Strangers who come to Russia, with the express purpose of teaching, are obliged to be examined by the commission, no matter what diplomas they may have received in other countries. This rigorous measure was necessitated by the fact that bogus diplomas were given in certain countries. Foreign candidates are required to be sufficiently familiar with Latin to write a short composition and also to translate a simple Latin text into Russian. Strangers are also admitted to examinations, the passing of which authorizes them to instruct in history and geography in institutes and boarding schools. Young women who desire to give home education receive a diploma for such teaching, after passing an examination in the Governmental institutions where they have been under instruction. In St. Petersburg, Moscow, and twenty-six other capitals there are special secondary schools for young women belonging to the families of the clergy; which schools, in a six years' course, prepare graduates to receive diplomas giving them the right to teach in families. It is stated that of the present teaching staff, one-third have received a superior education in the middle class schools and seminaries, about one-third hold certificates from the training schools, and the remainder are persons of less educational training.

APPOINTMENT.

The curator in each government attends to the appointment of teachers in the gymnasia and scientific schools in that section. The inspector authorizes the appointment of teachers in the elementary grades, dismisses the teacher if not satisfactory to him, closes the school, modifies the curriculum, etc. In the schools carried on by the clergy, teachers are permitted to hold position through *lettres d'obédience* given by the bishop. Rectors of universities were formerly elected by the professors; but since 1884 the Czar appoints the rector, who is generally selected by the minister of public instruction from one of three candidates chosen from among the professors. The dean of each faculty is no longer elected by his colleagues, but is appointed by the minister. The professors are selected by vote, but the minister appoints them.

SALARIES.

In the elementary grades the position of a teacher is not as precarious as one might surmise. In the primary schools of rural districts the salaries vary from \$92 to \$277, but for more than half of the teachers the salary ranges below \$231. Ordinarily the teachers are provided with lodging and garden, but sometimes they are most poorly housed in one room or even a corner of a room. In urban and district schools teachers have lodgings, and their emoluments reach from \$386 to \$482. Women teachers have equal privileges with the men, and in many localities they greatly preponderate in numbers. In the progymnasia for girls the salaries rank from \$669 for the school inspector and \$502 for the mistress in charge—free lodging being included in both cases—to \$223 for the dames-de-classe, or class ladies. In the institutes for girls, the lady directress receives \$1,953 with lodging; the assistant teachers, \$1,004. In training schools a few years ago the directors received \$1,116 and certain privileges or fees; the teachers, from \$223 to \$669. The emoluments in the gymnasia were from \$1,116, with free lodgings, for the director, to \$413 for each master. The master gives twelve lessons each week, and at the end of fifteen years his salary is increased by regular gradation to \$837.

PENSIONS.

All persons holding the position of teacher under state authority are considered as entitled to an annual pension after a certain number of years' service. Many of the school functionaries in the country districts are not considered as employes of the state, and consequently are not entitled to pensions, and, up to a late date, not even the most modest pension was accorded to women teachers. In district and urban schools teachers receive a pension of from \$231 to \$277. A director of a gymnasia would receive about \$446 as his share after giving the requisite service to the Government.

By very early laws teachers who are recognized by the minister of public instruction as being in the service are presumed to be able

to fulfill the functions for twenty-five years and are then entitled to a pension, but if they are still equal to the requirements of their position, they can occupy the place for five years longer, receiving during the latter period both salary and pension. Another five years' period of teaching is also allowable with an addition of one-fifth to the pension. A professor, according to law of 1835, receives the title *emeritus* after twenty-five years of service, but, if able, he can still fill the position for a five years' period. The law of 1863 continued this plan, only it required a vote of two-thirds of the council to decide whether the person was fitted for an extension of the time of service. As cases of unfitness for further duty were reported to the minister a law of March 31, 1869, modified the decision by requiring a majority vote in the council. This was further modified by the commission of 1875 deciding that the reappointment after twenty-five years of service depended upon the professor's wishes, as sanctioned by the curator with the consent of the minister, but after thirty years' service he was to obtain the full pension of 3,000 rubles and not fill a professorship, although if desirable he might still remain a member of the faculty, and if allowed by the curator, take charge of a preparatory institute. The pensioning and remuneration in the case of an extra five years' period were not determined by this commission, but were left for further discussion.

COURSES OF STUDY.

In the infant and maternal schools the child of from 3 to 10 takes its first steps in education, its powers of observation are trained and it learns the first elements; in many of the schools kindergarten methods are found. Asylums, which rank below or with the elementary grades, are for children between 7 and 12 years of age. The instruction aims to give the necessary elements of knowledge and to thoroughly inculcate religious and moral ideas. Here, too, Fröbell's methods are used. The elementary grades take cognizance of the immediate surroundings of the pupils, the earliest lessons being by the intuitive method, the regulations including the mother tongue (*i. e.*, elements of Russian grammar), reading from manuscript and printed matter, writing, arithmetic through the first four rules, and singing. In the villages and hamlets there are two or three classes, if the attendance permits. In cities the higher grade elementary schools have in their six-year courses geography, Russian history, fractions, geometry, object drawing and drawing from copy, singing (especially church chants). If feasible, a trade is added for the boys and needlework for the girls. At the close of the course pupils are entitled to enter the governmental service without extra examination, and after a four years' course they are presumed to be fitted for the gymnasia. The district schools, maintained by the ministry of public instruction, and gradually being transformed into city schools, have a course of study in which religious instruction occupies an important place; arithmetic is limited to addition, subtraction, multiplication,

division and simple fractions. The elements of history, geography, and natural history are taught from books sanctioned by the Government. At the close of the third year pupils present themselves before the inspector or his delegate for examination in order to obtain the certificate for elementary studies.

The schools under control of the Holy Synod, which arranges its own programmes, give great prominence to religious instruction, reading, writing, and arithmetic coming next. These schools are generally presided over by some brotherhood, as that of St. Cyril and St. Methodius at Moscow, and the Brotherhood of Our Lady at St. Petersburg. A few cities have higher elementary schools of a parochial character, but, as a general thing, this is simply a complementary course of possibly two years.

Parallel with secondary and elementary courses are the technical and industrial schools. The intermediate technical schools correspond to Realschools, and in six to eight year courses give pupils sufficient knowledge of technical and commercial studies to fit them for industrial pursuits. The industrial schools take graduates from the elementary grades and form them into good workmen, mechanics, and designers. Among these schools are the railroad schools depending upon the ministry of posts and telegraphs. The lower grade technical schools have a course of study which does not go beyond that of the elementary schools. Their aim is to form skillful artisans and workmen in village industries. Pupils to be admitted must show that they have attended public school and enter for the purpose of learning a trade.

Secondary schools for girls date from an early period, but by a regulation of May 24, 1870, such schools were rendered uniform with the gymnasia and progymnasia for boys. The courses for the gymnasia were of seven years, those of the progymnasia three years, and in each there was a preparatory class. An eighth class in the gymnasia, called the pedagogic class, had as its aim the preparation of teachers for an inferior grade of schools. The course of study in the progymnasia covers religious education, Russian language, history and geography of Russia, elements of universal geography, arithmetic, caligraphy, and needlework; in the gymnasia, religious instruction, Russian language, literature, arithmetic, keeping accounts, geometry, universal geography and that of Russia, universal history and that of Russia, the principal elements of natural history and physics, the principles of domestic economy and hygiene, caligraphy, needlework, and gymnastics. Studies which are nonobligatory are the French and German languages, music, singing, and drawing. Pupils desiring to follow these branches pay such fees as are determined by the administrative councils. The course in pedagogy is principally destined for preparation of teachers, and consequently it comprises principles of education, systems of instruction, and methods applicable to gymnasia for girls. There are also practice courses under the direction of teachers of the institution. The graduation examination consists in a French or Ger-

man composition upon a subject given during the examination, and some knowledge of the history of literature of the two countries. The pupils must also speak the two languages thoroughly, and, in the last years of the course, are only allowed to use foreign tongues. In addition to the gymnasia and progymnasia, for day pupils, there are institutes or boarding schools dating from the eighteenth century, these institutions being, generally speaking, for the territorial nobility, and usually presided over by the widows of higher State officials who are left without fortune. They are aided by inspectresses, who direct the studies. The directresses and inspectresses occupy themselves particularly with the discipline and general care of the establishment.

The buildings occupied are of a superior class of architecture, with vast corridors, a large room for ceremonials, etc. The class rooms and directress room are on the first floor; the recreation halls, sleeping and dining rooms on the floor above. Large gardens adjoin these institutes, which serve as play grounds in pleasant weather. Special costumes are worn in the different institutes. There are also regular boarding establishments of a secondary class for girls. All these schools have a woman in charge of each class, who resides in the institution, and looks after the discipline of the classes. These ladies in many cases have been pupils in the schools, and, having aptitude for the work intrusted to them, remain connected with the institutions as class supervisors. The conditions of admission to these institutes for girls are not severe. The girls must know how to read, write, count, read French and German. The course of study covers Russian, French, and German languages, history and literature, Greek and Latin (optional), history, geography, cosmography, natural science (physics, natural history, elements of chemistry), arithmetic, geometry, algebra, pedagogy, religion, and history of the church. The religious instruction devolves upon priest and pastors, of different creeds, in the neighborhood, but proselyting is not thought of.

The education of women in Russia is a question of great interest to all, and has been carried to a higher point than in other countries, the United States excepted. Courses for women have been opened by university professors similar to those of the Sorbonne in France. Special courses in medicine are open to woman, but they are only authorized to follow such courses if they have passed examinations in gymnasia and institutes. All throughout the Empire the higher culture of women is a noticeable feature. The empresses in turn have manifested great interest in the development of their sex, and the influence of women has been marked in elevating society and in contributing elements of distinction to the Russian character.

Secondary instruction for boys is given in progymnasia and gymnasia, the first mentioned being preparatory to the latter. The gymnasia are divided into philological and industrial gymnasia; in the former the study of ancient languages predominates and the Government favors study of the classics. In the latter, natural sciences and

mathematics take the lead. The Realschools, or industrial gymnasia, are destined to prepare persons for an entrance into commerce and industry. The courses in the progymnasia are similar to the first four classes of the Realschools, so that students frequenting these schools are preparing themselves for any career, and, when they are ready to choose, they either enter the gymnasia and continue studies leading to a scientific and literary course, or carry on such studies in the Realschool as apply to commerce and industry. The progymnasia programmes do not differ greatly from those of the gymnasia, being preparatory to them, but the ancient languages are not included. At the close of the course in these preparatory schools a certificate of maturity is given.

Statutes of 1828 were the basis of gymnasial study. These statutes were modified in 1849 and again in 1864,¹ when the conditions of admission to the gymnasia were lowered. In 1872, Count Dimitri Tolstoi urged the need of a general plan of instruction for gymnasia and progymnasia; the plan to emanate from the universities, but to be modified by teachers, pedagogical councils, and curators.

A commission appointed at that period endeavored to bring about more unity in methods of instruction, so that pupils could pass from one gymnasia to another.

Prior to the ministry of Tolstoi natural sciences and physics found a prominent place in the course, but changes were wrought from year to year as the exigencies of the times or political requirements seemed to make it necessary, so that at the present time the classics preponderate.

The following is the programme of studies in 1889 in Russian gymnasia:

Classes.	Preparatory class.	I.	II.	III.	IV.	V.	VI.	VII.	VIII.
Religion (orthodox)	4	2	2	2	2	2	1	.....	.....
Russian language and literature	4	4	4	4	3	3	2	2	2
Latin language	8	7	5	5	6	6	6	6
Greek language	6	6	6	6	.....	7
Logic	1	.....
Arithmetic	4	4	2	.....	.....	.....	.....	.....
Algebra	2	2	2	1	1	.....
Geometry	2	2	1	.....	.....
Plane trigonometry	2	3
Mathematical geography	1
Physics	2	2	2
Natural science (a)	2	.....	.....
History (b)
Geography	2	2	2	2	.....	.....	1	1
German language	3	3	3	3	2	2	2
French language	3	3	3	3	3	2	2

^a According to the statutes two hours must be given to natural science in one of the higher classes. This short course has as object to give the pupil knowledge of the most important objects of nature and their relation to each other. These relate more particularly to botany, zoölogy, and knowledge of the earth's surface.

^b For the teaching of history there are two courses: A short one of the different epochs given in the third and fourth classes, and a more extended course in fifth, sixth, and seventh classes.

¹ The programme in 1864, in addition to ancient languages, included cosmography and geography, chemistry and physics, which greatly interested the students; and arithmetic, algebra, and geometry, in which abstract branches they seemed to feel less interest, as it is stated by M. Hippeau.

The classical gymnasia are preparatory to the universities, but for those who desire to enter real life and do not care for the university course, the completion of the course of study is of no great value. Such students gravitate to the Real schools, which according to the regulations "afford young men an education capable of immediate practical application" or "prepare them for the higher professional schools." But it is stated on good authority that the Real schools, even with the supplementary seventh class, with its mechanico-technical and chemico-technical divisions, give so little firm foundation for efficient knowledge that few manufacturers are willing to employ the Realschool students, and either seek for those who have had instruction in technical schools, viz, the higher industrial schools, or prefer to take workmen who have learned their trade by personal observation and experience. The Real schools are few in number, less than 100 in 1887, while the gymnasia number more than 230. Technical and industrial schools numbered at that date less than 50, but so great has been the call for such training, and so manifest is the growth during the past quarter of a century of the so-called Russian system of mechanical art¹ education, that these schools now present a most interesting development. The progress attained during this period is so marked that an extended report of technical and industrial education by M. Anopoff, of the Nicholas Industrial School in St. Petersburg, has aroused great interest in England and other countries. A digest of the same is given as an addendum to this statement of education in Russia.

Students desiring an academic education pass from the gymnasia to the universities. These latter institutions differ somewhat in methods in the different localities, but the present status of the faculties may be gathered from the following statement:

The prerequisites required by the state commission for examination or examining board, are quite voluminous, but a general digest of the

¹ It may be stated here that the workshop is the foundation of the Russian system of industrial art. The village industry is the form which such mechanical art takes. The Russian makes the art* the fundamental and builds his trade on that. He realizes that there are certain general practices underlying instruction, and that one can not teach art without teaching the constructions depending upon them. He believes that the true place for mechanical arts is in the school while the student pursues his studies, and that manual instruction should be a part of the school course. Hence he has established the workshop and has formulated a system which is viewed with interest everywhere and has been generally adopted in different parts of the United States, commencing in the Commonwealth of Massachusetts, at the Institute of Technology, and extending westward and southward to other schools.

² The gradual changes in university organization with the reform movements taking place from time to time, are clearly brought out in "Die Reform der russischen Universitäten nach dem Gesetz vom 23. August 1884." The main points are here interpolated. University laws were passed in 1835 and 1862-63, those for Dorpat in 1865, but not satisfying the higher functionaries, other efforts at reform were made in 1871-72 under Minister Tolstoi, the university officials being asked to specify

*Vid. President J. D. Runkle before the N. E. A. in 1877.

same will clearly show the importance of university study as viewed from the Russian standpoint. The classics form the basis of all study in the historico-philological section, and the students are required to show that they have a firm basis for work in classical philology. The studies are divided into obligatory and supplementary branches. The student must be able to interpret Greek and Roman authors, antiquities, literature, mythology, grammar, history, history of art, and philosophy. At least four of the classic poets and prose writers must have been thoroughly studied and the translations into Russian must be made in good style. The methods to be employed in scientific interpretation and philological criticism must also be studied. In philosophy a thorough knowledge of Plato and Aristotle is required as a basis for further philosophical development. In history, chronological and geographic data of the principal events of Greek and Roman plastic art when at its highest development, and also the special epochs of art development in the Christian world, are requisite. The examination covers either one of the following two supplementary groups of studies, viz, the linguistic and the historic. In the former is required a knowledge of Russian language and literature, from the oldest periods of history, with the general growth to the present time, the Slavonic tongues, with knowledge of the grammar, church literature, and the changes wrought in the different periods with the dialect forms, and the history of western European literature. This includes cognizance of such writers as Dante, Cervantes, Shakespeare, the French classical writers, Goethe and Schiller. The historic group covers the world's

what they considered most needed, each in his own institution. The general request was for more salary, more instructors, and more fellowships. A committee for special inquiry was appointed in 1874. Its investigations led to the reforms of 1884, which urged the necessity of leaving disciplinary and administrative affairs to the Government, of adopting new methods of appointing professors, of requiring higher entrance examinations and good behavior as a prerequisite for the holding of university scholarships, guaranteeing liberty of instruction under Government supervision, limiting the power of the professors, and establishing an outside commission for the examination of students for graduation. The law of 1863 accorded little power to the curators [curator, a prominent person having the confidence of the Czar. He looks after the welfare of the university whenever an intermediary between the higher authorities and those of the university is required], but more to the university rectors. The law of 1884 empowered the curator to take charge of all practical instruction, to be held responsible for all disorders, and to take cognizance of all special matters; an inspector and several assistants to aid the curator; the rector to look after the organization of instruction and discipline; the dean, the curator, and rector to coöperate in bringing about better discipline in the university. The rector was to be appointed by the Czar and the deans by the minister. The minister could either appoint the professors or sanction the appointment of a candidate presented by the university authorities. By the earlier laws the universities were established according to the German plan, but later discussions tended towards a Russianizing of these institutions by appointing natives of the country, who, being cognizant of the country's aims, would exert an influence over the students preferable to that of a foreign element. By law of 1863 the Government controlled university examinations, and although objections were made to this plan by the different commissions

history, history of Russia, of the Slavonic peoples, and church history (with special stress laid upon the history of the Orientals, the Middle Ages, and the present epoch), history of the European peoples, and a general knowledge of all the principal events in Slavonic and Russian history, etc.

The examinations by the commission in charge of the physico-mathematical section deal either with the domain of natural science or that of mathematics. Included under natural sciences as obligatory branches are chemistry, zoölogy with comparative anatomy and physiology, botany, mineralogy and geology with paleontology, physics, and physical geography. In chemistry the student obtains insight into organic, inorganic, and analytical chemistry, with a knowledge of chemical processes; in zoölogy a fundamental knowledge of zoöatomy, anatomy, physiology, embryology, histology, and biology, so that he understands the connection between those different divisions and can explain charts and drawings of the same; in botany he must have a fundamental knowledge and be able to analyze the plant world, especially the local flora; in mineralogy the same system of thorough study is applied throughout the mineralogical, geological, and paleontological fields; the course in physics is equally comprehensive, covering electricity, atmospheric changes, theory of light undulations, hydrography and meteorology, optical instruments, weights, and movement of fluid and gaseous formations, etc. In the section of physics the student has to show that he has made special studies in chemical analysis, in comparative anatomy and physiology, in the use of the microscope in the characterization of the different types of plants, in the physical and chemical attributes of

appointed, it was decided in 1884 to create governmental boards of examiners. Discussions *pro* and *con* led to provision being made for the appointment of five boards of examiners, namely, the historico-philological, the physico-mathematical, the legal, the oriental, and medical. The chairmen of these boards were appointed by the minister. The doctor's diploma in medicine in a foreign university entitled to position on the medical board. The passing of the examination before the commission entitled to a diploma of first or second grade. (There is, however, only one diploma in medicine, that of physician.) The preparation for academic degrees and the preparatory examinations before passing to higher classes were left to the university authorities, as the State examination did not prevent the faculties' examination of the student to find out his pedagogical status. A programme was provided for each faculty to which each student must adhere, but students were not obliged to attend lectures, and were allowed to pass from one faculty to another to hear lectures on any given subject. One feature of the university plan was the establishment, with the minister's permission, of a "Seminar," in which the student who has recognized ability in some specialty receives instruction with a view towards a higher development in the desired study. In the faculty for natural science, philology, and history the "Seminar" aimed to prepare teachers; in the legal faculty, to prepare jurists. The plan and length of existence of the "Seminar" depends upon the minister's decision. Each university sets aside \$4,185 for remuneration of professors, room rental, purchase of books and school material for use of the "Seminar." The discussions *pro* and *con* as to methods of instruction in the different faculties brought about a more practical line of work, with fewer studies and less cramming for examination.

the earth as they pertain to agronomy, etc. In mathematics the student is required to show both practical and theoretical knowledge, by examination and otherwise, of the theory of numbers, higher algebra and geometry, theory of elliptical functions, the elasticity of bodies, practical mechanics and descriptive geometry, theory of gases, of light, differential and integral calculus, and in fact he scans the whole mathematical field, with its attendant branches of physics, mechanics, and astronomical calculations, hydrostatics and hydronomics.

The commission for the examination of the legal faculty indicates in its programme the diverse directions in which the lecturer may branch out, as it is considered that a detailed and systematic programme would narrow the field too much. The subjects treated are (1) Roman law with the history of the same (this includes knowledge of political history, and of religious, public, agricultural, and commercial life of Rome), and a knowledge of general legal concepts based on Roman law; (2) history of the laws of Russia, with the gradual development of states' rights; and civil, criminal, financial, religious, and trade laws; (3) the rights of government, with military and judicial laws, the rights of the governing powers towards the people; (4) the rights of the church and of the Russian church in particular, with knowledge of the Roman Catholic, Armenian, Gregorian, and Lutheran tenets; (5) police regulations, with the conditions governing the moral and material welfare of the people; (6) political economy and statistics; (7) civil and commercial law and procedure, with theoretical knowledge of the Russian civil code and of commerce by land and sea, and the rules governing international law; (8) criminal laws and processes; (9) laws governing finance, with a scientific knowledge of Russian income, monopolies, custom duties, etc.; (10) international law, with the political system of Europe from 1648 on, the rights of neutrality, etc.; (11) the philosophy of law, with the principal developments of the old classic world, and fundamental knowledge of the works of Plato, Aristotle, and Cicero; (12) encyclopedia of the science of law, with a clear understanding of law in both objective and subjective sense. The students must also have special knowledge of at least two of the above branches. The plan of studies includes eighteen hours a week in each semester, or one hundred and forty-four hours for the eight semestri; to Roman law, thirty-six hours; history of Russian law, sixteen hours; civil and commercial laws of Russia and their processes, twenty-two hours; Russian criminal law and processes, twelve hours; Russian governmental, church, police, and financial laws with political economy, eight hours each; international law, six hours; statistics, encyclopædic knowledge and history of the philosophy of law, four hours.

For the examinations by the medical commission the student must show a certificate of *tentamen physicum* which covers descriptive anatomy, histology, and embryology, physiology, physics, chemistry, pharmacy, pharmacognosia, zoölogy, botany, and mineralogy. He

must also show that he has been in attendance during ten semestri and has had practical experience, giving the number of cases he has treated and the reports which he has made on clinical cases, dissections, etc. The medical examinations extend over six weeks, and the course includes: (1) descriptive anatomy; (2) descriptive histology, with constructive knowledge of the organic development, use of the microscope; (3) pathology and the different changes perceptible in the body after death; (4) topographical anatomy with requisite operations; (5) physiology, with the use of instruments; (6) qualitative and quantitative pathological chemistry; (7) pharmacology, with use of medicines, mineral waters; (8) pharmacy with diagnoses, and the use of combinations in medicine; (9-13) special pathology and therapeutics, with practical demonstration of the same; (14-17) knowledge of surgery and ophthalmology, with demonstration of the instruments used, examination of the sick, with diagnosis of disease; (18) hygienic and sanitary demonstrations; (20) science of veterinary surgery and a knowledge of epizootics. The course of study requires twenty-two hours of lecture or study, and practical exercises during each of the semestri, the subjects being arranged in a systematic course of from six to eight hours in each branch. The students are expected but are not obliged to follow the courses. The plan arranged by the above law of 1884 has been the means of progress in university study; the examinations before the commission appointed by the minister give a true value to the diploma. Whether the student receives a first or second grade diploma depends upon the aptitude manifested at the examination. In the medical faculty the first diploma, that of a physician, gives the right to practice and to present one's self for the doctorate degree.

Higher-grade education is disseminated in quite a number of special schools. The St. Petersburg technological institute gives not only theoretical knowledge, but also demands the technical and practical use of the same. In the two lower courses the students study the theory of the fundamental branches and instrumental drawing; in the two following courses, mechanics and chemistry, from the scientific side, the mechanical part to include working drawings of machinery operated by water and steam power, the chemical, such drawings as are used in chemical laboratories, in glass and pottery manufactories, and also qualitative and quantitative analyses. The fifth course includes, in the mechanical division, more extended plans of machinery, foundry work, casting, turning, locksmiths' work, smiths' work; in the chemical division plans to be worked out in different chemical industries and the working out of such plans as would naturally enter into these technological branches. In free hours students go out with their professors to inspect the architecture of new buildings in process of erection, and visit manufactories and railroad workshops, thereby obtaining practical knowledge. The St. Petersburg Historico-philological Institute follows, in the main, the course of study of the historico-philological faculties of the universities, but dif-

fers therefrom in having the lectures tend more towards the requirements of teachers in gymnasia, for which position some of the students are being fitted, and in having a course in pedagogics. Physical training enters into the course, as the students have nine hours each in the gymnasium.

The Demidoff Lyceum of Jurisprudence at Jaroslaw, has a corps of professors giving instruction in practical exercises in Roman law, political economy, in civil processes according to the laws of Russia, of the present and of the olden times.

The Lasarew Institute for Oriental Languages, in Moscoy, has as special object the teaching of Armenians, although it includes students of all ranks, all confessions, and all nationalities. In the gymnasial division the Armenian language is obligatory; in the three higher classes Armenian, Persian, and Arabic literature, the Turkish-tartar, and the Iberian tongues. The lower course is theoretical, the upper more practical in character. In 1883 juridical studies were also introduced.

The polytechnic school in Riga has seven divisions—the agricultural, chemico-technical, geodetic, civil engineering, mechanical engineering, architectural, and commercial.

The Institute for Forestry and Agriculture, in Nowaja-Alexandria, has theoretical courses in agricultural economics, bee and silk culture, fish culture, veterinary science, geodesy, descriptive geometry, agricultural chemistry. Practical instruction is given in veterinary medicine, in farming, in garden work, in forestry, and in laboratory work. The students also make excursions with the view of studying of botany and zoölogy. These and divers other special schools aim to train the youth in various directions leading to professions.

The general trend of instruction in the different grades of schools which form the school system is, if the generality of writers may be relied upon, to serve more and more fully to keep the Russian youth within a certain limit, so that he may become thoroughly cognizant of all branches from the Russian standpoint and that any tendencies towards German socialism may be quelled. The student is to learn to comprehend the needs of his own country, to prepare himself so that he may develop its riches, to become imbued with a knowledge of its institutions, and, in the lower classes, to be taught its village industries, so as to make use of his talents near home, rather than to drift away towards other lands.

SCHOOL MANAGEMENT AND METHODS OF DISCIPLINE.¹

The management of schools of all grades would seem to be rather a complicated affair in Russia, for, on account of the numerous school officials who have various duties in regard to schools, it appears that

¹ Information in regard to this point has been obtained in part from manuscript furnished by Miss F. Toulmin Smith, of England, in part from lectures given by Dr. Himowich at Johns Hopkins University, and in part from other sources.

little is left to the teacher beyond the mere inculcation of instruction, and even in this he is subjected to regulations imposed by the highest authorities; all the business arrangements are subservient to rules laid down by the department of public instruction; the council, or learned committee, is responsible for selection of and changes in school books, programmes of studies, etc., and it is this council which finally adjusts all questions appertaining to the elementary schools. In each educational circuit the curator and inspector and the council aiding them watch closely over the interests of the schools, furnishing such school material as has been approved at St. Petersburg, suspending schools if they are prejudicial to the community, dismissing teachers, and in every way guarding the interests of the government. Each city school has an inspector attached to it, and he, or the principal, is a member of the school council, which discusses the needs of the school and reports to the next higher school functionaries.

Private schools are all under the supervision of the circuit inspector, and the whole plan of the school must have been submitted to the authorities ere the teacher is permitted to open the school.

The gymnasia have two committees to manage their affairs: the committee of management and the pedagogical committee. The former looks after the funds and the construction and repairs. The latter examines and reports upon all school questions, behavior, examinations, rewards, etc. Changes in programme and selection of text-books must, however, be submitted to the curator of the educational circuit. The pedagogical council may choose the teachers, but the curator must sanction such choice. The governor of the province acts as an honorary curator, visiting the schools whenever he is inclined. In the gymnasia the teachers are supervised by the inspector, and all are under the eye of the director, who rules absolutely, but has no right to expel a pupil unless the council (composed of directors, inspectors, and teachers) sanction such expulsion.

The directors and inspectors are governmental appointees, and are expected to abide by all rules laid down by the ministry of public instruction; consequently there is little individuality allowed. The directors and inspectors are assisted by teachers and class tutors, the latter being held responsible for the conduct of pupils in and out of the classes, even in boarding places. The tutors have assistants to aid them and take their place if absent. Each tutor is supposed to look after about 15 pupils. The teachers are expected to be very conservative in their methods; to be present in school at certain hours of the day dressed in the uniform required. The pupils arise when the teacher enters and stand until he reaches his desk. Opening prayers are read in a perfunctory manner by a pupil, and then the work of the day commences. Class journals are kept, and every method is pursued to keep strict account of the pupils' daily life, although there is no special regulation which requires a certain amount of study from him.

The methods employed in the girls' gymnasia and progymnasia are similar to those of the boys' gymnasia. The functions of the two committees are about the same. The lady principal is expected to be present at the meetings of the committees, even as is the director in the other case. One of the lady patronesses (chosen by the town authorities, but sanctioned by the Empress), and other persons who may be supporters of the gymnasia, must also be present when the committee of management holds its meetings to discuss teachers' salaries, school fees, free tuition, morals, and manners, etc. The presiding officer of the pedagogical committee is generally a director of a boy's gymnasium, and his authority extends in some cases even to the dismissal of teachers. Yet if there is any dispute between him and the lady principal as to examinations, awards, transferring and marking pupils, appeal can be made to the curator of the circuit.

In the institutes for girls the arrangements are very similar. The lady principal has full charge; the inspectress superintends the class ladies (*dames de classe*) and attends to the carrying out of all regulations and to the observance of good manners in the school. The *dames de classe* are responsible to her for the general demeanor of each member of the class to which they are assigned. The instruction is given, however, by visiting teachers, who are under the supervision of an inspector. This inspector sometimes gives lessons, and has duties imposed on him in connection with the results of the examinations. The field of study is a broader one than in the gymnasia, and the graduates receive a diploma which enables them to teach in gymnasia.

The methods employed in the universities and special schools have been stated substantially under the heading "Course of study," so that further statements seem unnecessary.

DISCIPLINE.

The numerous persons in authority in the different grades of schools are naturally on the alert for any infringement of discipline, and various are the punishments meted out to the unfortunates. The pupil may be reprimanded, may be kept in; he may be even shut up in a small room under guard. In the class journal there is a record kept of the general bearing of the pupils in the school. Corporal punishment is not allowed in any civil school, but expulsion for dereliction of duty is permitted when the authorities—namely, the committees, inspector, or curator—together sanction such expelling of the pupil, and in the secondary schools the expulsion is sometimes accompanied with the statement that the pupil can not enter another gymnasium in the Empire, or if he is permitted to attend another secondary school he may be required to pass another entrance examination. The discipline is not limited to the school, but may be said to come under three heads, viz, when in school, at home, and on

the street.¹ If a pupil is found on the street, it is supposed that he ought to be either at school or at home; if he does not properly salute the school functionaries he is subject to reprimand; if he is a Realschool or gymnasium pupil he is prohibited from wearing civilian's dress, and that prohibition extends to his not being allowed to visit secret societies, public balls, clubs, and similar places. The same code applies in a measure to the university student, and in military schools there are even more rigid rules for the training of Russian youth.

STUDY AND RECITATIONS.

In the rural schools the general aim of instruction is to train pupils, from their eighth year on, in the four rules of arithmetic, in singing

¹ A translation of a Russian ticket in the hands of a Russian gentleman, giving the rules of the third kind of discipline prescribed for the students of the gymnasia and Real schools of the city of Kief. The ticket reads as follows:

"Rules for pupils of middle education at schools of the city of Kief, not in the walls of the schools and not at home.

"1. It is prohibited to the pupils to visit institutions of pleasure, as Chateau de Fleur, Tivoli, Mineral Waters, or pleasures in Bokovaya Roseha (grove), on the other side of the Dnieper, or in any other pleasure gardens. It is allowed to visit the Botanical Garden.

"2. It is allowed to visit the theater only when permission is granted by the authorities in each special case, and not otherwise than by tickets issued by the said authorities, and by no means in the gallery.

"3. It is prohibited to visit public balls, masquerades, clubs, dancing evenings, tea-gardens, café houses, confectionaries, billiard halls, and other like public institutions. It is strictly prohibited to visit secret societies or circles.

"4. It is prohibited to go boating on the Dnieper, and on pleasure walks out of the city, unless together with the parent or guardian.

"5. It is prohibited to walk in the streets or be out of doors later than 9 o'clock p. m., unless there be some extra event, or the pupil is accompanied by parent or guardian.

"6. Every pupil is compelled to have this ticket with him, and to present it at the first demand of the police, or persons employed by the Government, known for that duty by their appearance. In case the pupil refuses to fulfill this demand, or if there be plain disobedience, the person to whom this matter is intrusted has the right to apply for assistance to the police in order to bring the offender to the school where he belongs.

"7. The pupils, when not at home, must fulfill punctually the ordered form of dress, not excluding the knapsack for books, with all the school supplies, and all his buttons must be buttoned. To wear civil dress is strictly prohibited.

"8. On meeting with officials, and also with the teachers or assistants, the pupils must greet them with a polite bow, taking off the cap or hat.

"9. It is prohibited to take out books for reading from public libraries. There is a library in every school purposely for the scholars, from which the pupils only may draw books for reading. Should it happen that the pupil take out a prohibited book, he must present it to the officials.

"10. No one of the pupils has the right to be engaged in tutoring without the special permission of the officials."

It is stated that in large cities it is difficult to enforce these rules, but in smaller places they are carried out.

and writing, in reading in the Russian and Slavonic tongues (the latter being necessary in order to read the required prayers), and in the catechism and Bible. There are generally two classes in these schools, and the inspector of the district has general charge of instruction. The two sexes may be educated together from their eighth to their fourteenth year. If there are not enough pupils to have one school to each parish, then ambulatory schools, as in other northern and sparsely-settled countries, move from place to place as they are needed. In the urban schools (one school to 1,000 inhabitants is the intention, but not the rule) the hours are from 9 to about 3 o'clock, with intermissions between the 45 to 55-minute recitations. The sessions are opened and closed with prayers. In many of the schools, both village and town, instruction leading to trades has been introduced of late years. In secondary schools there is an entrance examination unless the pupil has passed through the course of study in the preparatory class, which he may enter at 10 years of age if he shows himself to be of average intelligence, if he can count up to 1,000, add and subtract, and recite two prayers. Attention to the rules of the school and preparation from class to class through the eight classes to matriculation entitle him, if he be a gymnasial pupil, to the passing in his eighteenth year to the university without further examination. Should the pupil seem backward in certain studies, then he remains another year in the classes where those studies are taught. In the majority of schools of all grades the recitations are carried on in the Russian tongue, the plan of a few years ago of teaching in the German, Polish, or other common language of the province having been relegated to the past by Imperial decrees which require the use of the Russian language in all schools.

PROMOTION OF PUPILS.

This occurs in all schools after the annual examinations in April or May. The examinations, which take place in some public building, before the school officials and others interested, are both oral and written and last many hours, so that the naturally timid pupil is oftentimes under great strain. If the school preparation has been thoroughly conducted there is, however, but little chance of failure, as many of the questions are familiar to the pupil. In the private schools the annual examinations are also held in the presence of the inspectors and teachers.

FORMATION OF PROGRAMMES.

As has been mentioned heretofore, the programmes of study emanate from the committee in charge in the ministry of public instruction, even the text books being chosen by them. The programme of private schools must be regularly vouched for by the authorities of the educational circuit, according to the rules promulgated by the ministry. By law of July 13, 1884, the Holy Synod forms its own programmes of study, but it is generally conceded that the central authorities are thoroughly informed in regard to all such matters.

SCHOOL ORGANIZATION.

BUILDINGS AND GROUNDS.

In villages where the people are well-to-do the schoolhouses are suited to the requirements of the school population, but in many of the rural districts there is great lack of accommodation, the pupils sit on the floor, and both light and heat are lacking. But whenever the provincial assemblies, or *zemstvos*, can so arrange it there are suitable school rooms and desks, the requisite books, diagrams, geographical and historical pictures, etc. In the city schools the buildings are more likely to be according to sanitary requirements.¹ Many school buildings, however, are not well arranged in a hygienic sense, though generally speaking, the buildings are roomy and well ventilated and the construction of school buildings is said to be improving from year to year. The gymnasias are located in the larger centers, and as a rule have large, well-ventilated class rooms, and have grounds suited to athletic sports, yet in many localities the gymnasias, progymnasias and Realschools are not properly housed and much complaint is made. In military and naval schools the same effort is made to have well-aired rooms, with the proper hygienic arrangements. In the gymnasias and institutes for girls the buildings are large, roomy, and lofty. The height of the class rooms in the institutes is 16 feet, length and width 32 by 24 feet. The halls are large and airy, but there is a lack of spaciousness in the dormitories.

The schools are intended to be so organized as not to have over fifty pupils to a class, and thirty is the average. School fees are charged in all grades of schools, from the elementary through the higher grades. There are free pupils, however, and parents are aided if too poor to buy text books and other material. The authorities also create scholarships and bursaries for poor students, and in all schools there is a fund for needy pupils, which fund is created and kept up by a small annual subscription from teachers and friends.

HOURS OF SCHOOL AND RECESSES.

The hours of school range from 9 to half past 2 o'clock, although in some cases extending to 3 o'clock in the afternoon. If, in the lower elementary grades there are too many pupils, the boys sometimes receive instruction from 9 to 12 o'clock, and the girls from 1 to 3 or 4 o'clock. There are recesses and intermissions, the number of which is not designated. The school week is six days, the length of recitation varies, it may be forty-five, fifty, or fifty-five minutes, but between recitations there is an effort to air the room and give the children opportunity for change of position; after about five minutes the pupils are again in their places for work.

¹Information furnished by Miss F. Toulmin-Smith, of England.

HOLIDAYS AND VACATIONS

Are not distinctly specified, but include the summer months, church and legal holidays, Easter and Christmas. For the pupils of military schools there are also certain imperial holidays.

COMPULSORY ATTENDANCE.¹

Attendance is obligatory upon children between 7 and 12 years of age (8 to 12 in rural districts), but it has not seemed possible to carry out this provision in all provinces. In many of the provinces latitude is left to the zemstvos to act in this matter as they deem it best, and still it may be stated that province after province has endeavored to carry out such regulation, the Baltic provinces taking the lead. The communal authorities can dispense with the regular attendance of children if they live too remote from a permanent school, and in case of bad weather or famine (as during 1890-91) they may be excused from school attendance.

SCHOOL SUPPLY.

The intention of the ministry of public instruction is to have the schools supplied with apparatus and school material, and through the local authorities it furnishes not only text-books, but apparatus to the elementary grades. Each gymnasium is supposed to possess a cabinet of physical apparatus, natural history specimens, geographical atlases, globes, gymnastic apparatus, music books, etc. The progymnasia are also supposed to be similarly equipped, except in the matter of natural history collections and physical apparatus. In the secondary schools for girls, progymnasia, gymnasia, and institutes, every facility for study is to be given, and the same intention is manifested in special schools. Yet the many changes in authorities, local and educational, the change of policy at St. Petersburg under the various ministries, the undercurrent of socialism permeating all classes, the necessity of keeping the country on a military footing, the famine arising from poor harvests, all these things combine to make even the best efforts to improve the schools comparatively futile, except possibly in some of the higher grade

¹ The attempt to bring about compulsory attendance throughout Russia is thus stated: Towards the close of October, 1871, the Zemstvo of the district of Skopine (government of Riazan) resolved, after mature deliberation, to demand that the attendance at elementary schools be made obligatory. In the government of Penza the communal assembly of the village Lvovskaia-Varejka requested that education be made compulsory for all children from 7 years on, the parents being subject to a fine of from 25 copeks to a ruble in case of failure in attendance. Ossa (province of Perm) demanded obligatory instruction for children from 9 to 14 years of age. The provincial assembly of the district of Constantinograd (government of Poltova) voted, in 1866, for the principle of gratuitous obligatory instruction in elementary schools for children between 8 and 14 years of age, with a fine of from 25 copeks to a ruble in case of nonobservance. Thus it is seen that the local authorities were in sympathy with the state authorities as to the need of compulsory education.

institutions and in the most well to do centers. Rules and regulations concerning schools are made from year to year, as occasion warrants, but these decrees remain a dead letter on the statute books, and the lower schools, and sometimes those of higher grade, are often without even the necessities for carrying on instruction.

SUPPLEMENTARY INSTITUTIONS.

LIBRARIES AND MUSEUMS.

In the Imperial library, at St. Petersburg, there is a valuable collection of manuscripts in Russian, Slavonic, Arabic, and other languages, also valuable historical works, the readers of which numbered 113,562 in 1884. They examined 1,200 MSS. and 174,542 books in 206,645 volumes. Tickets with permission to work in the library were issued to the number of 12,323, and 3,721 visitors were shown the collections.

The public library and museum at Vilna and the central archives in several of the "governments" are frequently visited for purposes of study. The Rumjanzow Museum in Moscow is especially rich in antiquities and ethnographic collections. It has also a public library. The Caucasian Museum in Tiflis, containing a library of 30,000 volumes, has a special collection of topographical and agricultural maps. Its walls and ceilings are rich in decoration, the scenes being emblematic of the Oriental, Armenian, Byzantine, and ancient Grecian styles, representing, as it were, the different epochs of history.

The Imperial Historical Museum was placed under the charge of the minister of public instruction in 1882, and in 1883 was moved into a building of fine architectural proportions. In 1884 it received interesting collections in bronze and gold. The different rooms have typical representations of the stone age, the bronze age, the age of iron, and other world epochs.

The Pedagogical Museum, a recent creation, includes an artistic and pedagogical museum, a library and an establishment for all grades of instruction. Normal courses of four years' duration are arranged for forty students. The necessary tools, the ordinary necessities of life, a tea room, smoking room, etc., are also arranged for the accommodation of the student and reader. The care of the collections is assured by an annual subsidy of \$558. In winter the ablest men of science in Russia give courses of lectures at the museum, which are highly appreciated by the large audiences in attendance.

SOCIETIES.

Connected with the pedagogical museum are the Society for the Encouragement of Education in the Family, which is under the patronage of the Princess Ekatherina Mikhaïlovna, and the Society for the Study of Hygiene. This museum, it may be added, is a link between

the intellectual element in society and the masses, aiding the different classes, especially soldiers, by courses and conferences. An institution which is not less original is the Permanent Commission for Popular Conferences instituted a few years ago by the Russian Government, and which has for its aim the instruction of the people even while amusing them. For this purpose reunions take place in the most important cities of the Empire and in the barracks where soldiers are stationed. The lectures are usually illustrated by means of views found in the imperial museums and galleries, such views being reproduced on glass, then colored, and finally thrown on screens by a lantern, which presents the view in color to the spectator. These popular conferences deal with subjects which are especially chosen to suit the audience; if soldiers, then a military man talks about Peter the Great, Souvaroff, and indeed all the military glory of Russia. The conferences for the people treat of other subjects—of the liberation of the serfs, of Alexander II—the pictures in both cases serving to impress upon the audience such scenes as bear upon the subjects given. Other lectures are upon popular writers, with a description, perhaps, of the life of the writer.

The Society for Popular Education at Kharkof is under the charge of Mlle. Christine Altechevski, who is aided by 60 teachers. The society has charge of Sunday courses of study for women. These courses, found in different parts of Russia, have about 400 persons following them. A library with a class of books especially appropriate for the needs of adults and children is connected with this society. The age of pupils (peasants, working women, and servants) varies from 7 to 45 years. The classes are subdivided in groups, according to the knowledge displayed. School festivals tend to bring into communication the families, the teachers, and the pupils. The teachers, who give their time gratuitously to this work, take part in the educational councils of the society. The school organized at Kharkof by this association has become the model of the Sunday school for the rest of the Empire. An interesting point in regard to this work among the people was the appointing of a special commission to determine what books were read, or were the best to be read, by the people, and the effect of such books upon the minds of the parents and children. The result of this investigation was to classify about 2,500 works under the title of "what the people should read." A systematic plan of reading books of merit aloud to the people was also undertaken. The influence of this society is felt even in the world of letters, so that several authors have written books for the benefit of the people, or abridged well-known works on Russia and other countries. The schools are taught by ladies from the best classes of society, who volunteer for such purpose.

Other aids to education are the popular publications of the committee of elementary education, of the Society for the Propagation of Good Books, of the Intermediary, a society founded by Tolstoi, which intends to bring the higher and lower classes together on a common

footing. A new publication is called *Russian Thought*, the editor of which deems it useless to treat the peasants like children, but feels that they should at least have homeopathic doses of the intellectual culture which dominates the rest of Europe. There is also the school of *Yosnaïa Paliana*, founded and maintained by Léon Tolstoi, and the journal of the same name, wherein the celebrated writer develops his theories. These essays serve to show the interest which the higher classes of Russian society have for popular education.

Popular lectures were established under ministerial sanction as far back as 1873, a permanent commission being charged with looking out for this work and with elaborating regulations applicable to the organization of lectures which were inaugurated in St. Petersburg the same year.

A Russian society for the diffusion of useful books was early established, for during 1860-70 it had edited 101 books, of which 34,900 copies had been published and 16,000 distributed gratis. This society, which was recruited almost entirely among the nobility and burghers of Moscow, also founded a publishing house which furnished educational literature and popular reading as cheaply as possible. Translations from Pestalozzi, Channing, Bain, Owen, Froebel, Combe, Boehme, Virchow, and others, were also placed before the reading public. Provincial and local associations were also formed on a similar plan to the Society for the Diffusion of Knowledge, but most schools of the provinces obtain their school material from the depository of the main society. People's libraries were also instituted by this society, and an arrangement was made with the *zemstvos* to place educational literature gratuitously within reach of the peasantry in the country around Kharkof, if not elsewhere. There are many other societies which serve as a means for carrying on a higher grade of education, even to the continuation of university studies. Learned works on biology, philosophy, and chemistry are often published by them. Classed among these societies is the Society of Physics, an auxiliary of the University of St. Petersburg, and which, through gifts made for that purpose, gives more thought to astronomical observations than to experiments in physics. The Society of Naturalists publishes important works and organizes expeditions to other countries.

The Society of Amateurs for the Study of Anthropology and Ethnography has created a museum of applied sciences. The Society of Naturalists of the University of Kazan, independent of its scientific work, has established twenty-eight or more meteorological stations, a health department, a magnetic observatory at Kazan, and has organized excursions to continue studies in astronomy, botany, geology, and zoölogy. Then there are the Academy of Sciences, the Mineralogical Society, the Geographical Society, with its Caucasian and Siberian branches, the Moscow Society of Naturalists, the Archaeological and Scientific Societies of the Baltic provinces, and various medical and

educational societies. The work accomplished by the learned men of Russia is especially noteworthy in the lines of chemistry, biology, and physiology; women, too, have special courses of lectures in chemistry in the Alexander hospitals in St. Petersburg, and here, as elsewhere, they show themselves apt students, but as they were found to be without special preparation for such study the hospital commission has opened special courses for them in pharmaceutics, botany, and chemistry, anonymous members providing the funds for such study. The Russian Government has also undertaken to give them a solid preparation for the position of pharmacist. Women between 17 and 40 years of age are admitted if the examination requirements are met. During the three years' course they are admitted to university laboratories, so as to obtain practical experience.

SCHOOL SAVINGS BANKS.

It is questionable whether this method of establishing habits of thrift has ever obtained a footing in Russia, as the participants in the first congress for technical and professional instruction held in St. Petersburg in January, 1890, resolved to petition the Imperial Technical Society and the minister of public instruction to establish such banks in connection with the technical schools.

SCHOOLS FOR SPECIAL CLASSES.

The present number of schools for the deaf, blind, and idiots is not known. In 1882 there were 13 schools for the first-mentioned unfortunates, with about 50,000 pupils under instruction; 4 schools for the blind, and 1 for the imbecile population. Later information is not obtainable.

HISTORICAL SKETCH.

The earliest efforts towards culture in Russia may be traced as far back as 988, to the Byzantine Fathers, but it must be noted that the Russia of that period occupied only the center and southern portions of the present European Russia. Cyril and Methodius, two Byzantine Brothers, are accredited with forming the Slavonic charters, by which religious teachings were given to the people, and they and other brothers of the Order helped to disseminate a knowledge of reading and writing. The ravages of the Tartars from the Eastern Steppes soon checked the efforts of the Byzantines, but the invaders were tolerant of other religions, and through their efforts monasteries and convents were established, which were not, however, seats of great learning. The first school, connected with a monastery at Kief, dates from the fifteenth century; the second from 1629 in Moscow, which school had among its teachers some of the monks from the Kief monastery. About this time the Polish influence began to be felt, and the Greek orthodox believers had to contend with the Roman Catholic influence as brought into the

country by the Poles, who laid the foundation of the Jesuit schools of the early part of the seventeenth century. At the same date Russian schools were established on about the same plan as those of the Jesuits. The most famous of these were the Greek-Latin-Slavonic school at Kief, and the Latin-Greek school at Moscow, both of which aimed to instruct in two languages and in philosophy and theology. It is, however, usually considered that the earliest efforts to educate the people date from Peter the Great (1689-1725), for he brought Russia into relation with the nations of Europe by sending men to other countries to study, and by attracting men to Russia who were recognized as authorities in different branches of learning. He also established special technical schools for engineers and for naval science, military and naval schools—the naval academy at St. Petersburg in 1715—and a few people's schools. He also founded schools for the clergy, for nobles (whom he did not permit to marry unless they could read), and for civil servants or *Tchinovniks*.

It was Peter the Great who ordered obligatory instruction, and who intended by this method to place the Russian nation on a level with other European nations. He even ordered the alphabet to be changed from the Slavonic to the modern Russian characters, but the older language has still to be learned in all schools. The German influence dates from Peter the Great's reign,¹ and it was still quite apparent up to the reign of Elizabeth (1741-1761), but this Empress encouraged the study of the French language and literature, and in 1757 the founding of the Academy of Fine Arts in St. Petersburg was the means of bringing to Russia French painters, who did much towards strengthening the French influence.

During the reign of Catharine II (1762-1796) popular lay schools were established in many districts and towns, as also gymnasia for secondary instruction, and plans were made for the founding of three universities, the University of Moscow having already been founded in 1755.

In 1782 a commission was appointed to study the necessary measures for organizing elementary education in Russia. Its decision was to create two divisions, one having four-year courses for well-to-do people, the other having a two years' course for the poorer classes. The need of good teachers was so noticeable, however, that in 1786 the right of opening and teaching school was only accorded to those who could give proof of capacity. During the reign of Catharine II the convent at Smolna was established. This was the first of the famous

¹ The most famous German schools which have for over a century exerted a great influence are those of St. Peter, St. Catharine, St. Anne, and of the Reformed Church in St. Petersburg. They are now subject to rules laid down by the ministry of public instruction and rank with the gymnasia. Their students have always been highly trained. Moscow, too, has had two similar schools, dating from 1601 and 1668. The courses in these are more like the Realschool of the present day.

institutes for girls which are now found in different divisions of Russia, and to Catharine may be assigned the first efforts to educate daughters of nobles, the aim of Peter having been to educate the nobles and their sons. The advancement of education was most marked, however, under Alexander I, and in 1802 the first administrative organization was attempted through the creating of the office of minister of popular enlightenment. This ministry took the place of the committee or council of education established by Catharine II, and the duties were to organize a school system, to encourage the propagation of knowledge, and to inculcate philanthropic ideas.

In 1803 many communal schools were transformed into gymnasia, established upon the plan of those in Germany. The following year a decree prescribed the opening of more schools on lands belonging to the government or to the nobles, and even the clergy offered to aid in the educational development of the masses. As an outcome of the establishment of a ministry of popular enlightenment or public instruction, the Empire was divided (in 1802-1803) into school circuits, which consisted of the centering of the educational institutions of different provinces around the universities. This centralization was aided by the appointment in each circuit or district of an official who communicated directly with and represented the ministry in that section. The university centers were at first Moscow, Vilna, and Dorpat; later came St. Petersburg, Kazan, Kharkof, and Kief. In the cities four class gymnasia were opened; in the districts two class schools to prepare for the gymnasia. Then there were parish schools, with simple instruction preparing for the district schools. The Emperor was so intent upon the education of his people that he decreed that no one should become a civil servant unless he pass through a gymnasium.

In 1819 school fees were introduced as follows: \$2.79 for parish schools, \$5.58 in district schools, \$8.37 in gymnasia. These fees were used to pay teachers' salaries, to furnish awards for study and good conduct, and for pensions. In 1819 the University of St. Petersburg was developed from an earlier established pedagogical college which was suspended in that year. This college was reopened again in 1829, and kept open until 1859-60, when a course of pedagogical lectures was instituted in its place. This institution in all its phases aided greatly the cause of education and had many students, but it was eventually changed into the Historico-Philological Institute of 1867, described elsewhere.

As far back as 1828 energetic measures were attempted by the Government, which sought to bring all schools within the bounds of a central administration. A law of 1835 reorganized the universities so that they became teaching bodies rather than administrative bodies, and placed all the schools under the control of curators of school circuits, whose duties extended over several governments at a time. From 1834 to 1839 the subject of Real or modern schools was discussed,

as the classical schools, or gymnasia, did not suit the needs of all the people. Nicholas I (1825-55) in his endeavor to quell the revolutionary ideas which were widely disseminated between 1812 and 1848, wished to abolish or reduce the state universities, but the decadence was so complete after the Crimean war that he found it necessary to reorganize classical education.

During the reign of Alexander II (1855-81) there was marked progress apparent, for with the emancipation of the serfs in 1860 came a call for more schools, as prior to 1864 elementary schools were only established in small centers. In 1864 a law for the establishment of elementary schools was promulgated. This law, or statute, created three grades of education: Elementary (parish and city schools), secondary (progymnasia, gymnasia, and Real schools), higher (technical and the universities). These schools were to be administered by the minister of public instruction, his deputy, the minister's council, the director of the different divisions, the presiding officer of the learned committee, and the curator of the different circuits. In 1867 the oversight of elementary schools was given to the zemstvo and other local authorities, and in every district a school board was formed.

As supervisor of the district board there was the provincial council consisting of five members, two of which represented the zemstvos, two the tchinovniks, and the fifth the religious authorities or bishops. The duties of the last were to oversee the religious instruction in the common schools, but the bishop depended upon the village priests for all information, and these priests had the authority to visit the schools and give advice to the teachers, and if matters were not satisfactory to so report to either bishop or tchinovnik. As will be observed, the central authorities were trying to bring about better coöperation between the authorities and the schools, but the members of the school councils seemed apathetic, meetings of councils became more rare and the minister found himself without the means of knowing the number or condition of the schools. The result of this state of things was that the minister decided, in 1869, to create inspectors of elementary grades, and in 1874 the school councils were placed under the general charge of the minister of public instruction, the central authorities, in a sense, assuming control of education throughout the Empire. The laicisation of education was not a question in Russia, the clergy as a whole attended to their own affairs, although there were in the country priests who taught the peasants to read. The teaching of religion in the public schools was, however, separate from that of other branches. In less important centers of population the schools received children belonging to different confessions, priests of the Orthodox, Catholic, Protestant, Jewish, and Mohamedan religions taking part in the religious instruction and specially examining the pupils at different periods in presence of some person foreign to religious orders.

A notable point in education is that the military laws are so arranged in Russia that they contribute to educational progress by shortening the time spent in the army and recognizing the principle of obligatory instruction. The length of service is reduced from year to year according to the degree of instruction of the recruit. Those who have a certificate of studies in the elementary grades have the length of service reduced from six to four years. Students of the technical or industrial schools and gymnasia are also favored in the same way; the former have only three years to serve, the latter a year and a half. For university students the army life is reduced to six months.

The establishment, by the zemstvos, of lay schools in the country, and the placing of a certain amount of authority over the schools in the hands of local assemblies, general councils, and municipal councils, were the keynotes to an amelioration of the condition of school affairs. The villages in Russia had their own independent form of government, the heads of families meeting together to discuss village affairs, and the decision of the Mir (or village or communal assembly) being accepted as final by the members of the commune. This institution—the Mir—was presided over by the village elder, who represented the executive power. Through his efforts and those of the assembly general interest in educational matters was awakened. For the period 1866-71 there was noticeable an increase of schools, changes in the number of classes in the gymnasia, a larger expenditure for schools in the annual budget, and there were discussions as to the need of more practical development by the establishment of Real schools.

These progressive movements naturally led to the passing of a statute, in 1872, creating the Real school of the present day. This statute of May 15, 1872, created schools which fitted for special industrial professions and for higher technical schools. While the gymnasia were practically established for students who could prolong their studies until 22 or 23 years of age, the Real schools were for those who could not attend longer than their sixteenth or seventeenth year. This same statute permitted pupils of the lower classes of gymnasia and progymnasia to pass without preliminary examination into corresponding classes of the Real schools. By this method the child's natural aptitudes were soon determined, and parents or the authorities could decide which class of school was best suited to the pupil's need. These schools were organized on a similar plan to that of gymnasia and progymnasia—that is, as boarding and day school.

In 1872 another important reform was inaugurated which transformed district schools into regular city schools. The reason for this change was that the district schools were not progressing as was hoped, and it was decided to replace them by regularly established schools with a six years' course, the main elements of instruction being the same as in the two grades of district and city schools, when all alike, were three-

class schools (law of 1828). The teachers for different branches of instruction were also replaced by class teachers, each class having a teacher for all branches, except religion, which is under the charge of the clergy. The instruction was to be conducted according to well-established methods, and it was even intended to prepare the pupils for certain trades and professions. Still another important move of that period was the giving directors of normal schools (42 at that date) the right of voting in provincial school councils, their presence at such meetings being considered of value in the discussion of school questions. And still another reform consisted in the establishment of seminaries for special masters to take charge of these schools. Pedagogical courses, the expenses to be borne by the provincial authorities, were also established near gymnasia in thirteen different subdivisions of Russia. The exercises in these courses lasted two months and the aspirants for teachers' positions were expected to learn all about methods of instruction and the organization of schools in general.

From 1872 to 1884 there were a few changes chronicled, but in the main they were more in detail than in any general change of base, the statutes of 1872 seeming to be the formation of the school system. In 1884, however, there were movements in regard to higher education which have been fully presented under "Courses of study," as these movements dealt more especially with methods of examination, etc.

Graduation from the university is not a requisite for holding official position. Young men from good families prefer professional or military institutions, the school of law, the Alexander Lyceum, the corps of pages, etc. Many careers are however, open to the university student, so that boys belonging to impoverished families oftentimes desired a university education. For such students there are stipends from governmental corporations, or college funds; use of the first required the student after graduation to serve the State for a few years, generally six. The poverty of the many students has a certain effect upon the general academic success, and this point of relieving the student from the long struggle for a livelihood during his academic years has been freely discussed by the different commissions. The result of such effort is that through the donations and liberal aid given by the Government an intelligent population is kept in the universities, and the law of 1884 has been the means of much progress in many points of view, and the examinations passed before a commission give a truer value than heretofore to the diploma received.

The parochial schools were organized in this same year, by law of July 13, 1884. They depend upon the clergy, are especially favored by the Government, and are under the direction of the Holy Synod which places first and foremost in its programme "the law of God." These schools are kept up in rural districts by half-religious, half-patriotic brotherhoods.

Certain political movements¹ were the means of the closing or suspension of a few secondary or higher grade institutions—as on March 24, 1879, the closing of the Medico-Chirurgical Academy, on January 3, 1880, the closing of the Institute of Civil Engineers, on April, 1890, the temporary closing of the University of St. Petersburg. In the higher grade institutions the tendencies towards socialistic ideas are most noticeable, but these changes have not materially affected the general tone of educational effort. Decrees have been promulgated from time to time, which deal especially with such upheavals, such as the decree of October 15, 1891, which directed university councils to act as special tribunals for the trial of students who have committed political offense or committed any act detrimental to the law of public safety. Efforts are also being made by the authorities to eliminate, as far as possible, the anti-Russian feeling which has developed from the years of teaching by German and French professors, and by giving a firmer basis of instruction from the Russian standpoint, to bring about a more patriotic sentiment tending to educate a people more in sympathy with the endeavors of the Czar to unite his subjects of all nationalities and religions in one common band of brotherhood. Such may be said to be the main features of education in the vast Empire of Russia.

TECHNICAL AND ARTISAN² EDUCATION IN RUSSIA.³

By M. ANOPOFF, *Director of the Nicholas Industrial School in St. Petersburg.*

A most interesting report on technical education in Russia has been compiled by M. Anopoff, director of the Nicholas Industrial School in St. Petersburg. It gives an exhaustive review of all that has been done during the last twenty years in Russia in this important branch of national education, and is of special interest as furnishing information in regard to the most recent legislation respecting schools which have been or are about to be founded. M. Anopoff limits his statements to full details of intermediate and elementary technical and industrial institutions without entering into a description of the higher schools. The value of this report is so obvious that quite a complete digest is here presented. The report is followed by a fairly complete résumé of the first congress of technical and industrial educators, which was held in January, 1890; in St. Petersburg.

Technical and industrial education in the narrow sense in which I use the term, says M. Anopoff in his book on the present condition of lower grade of technical and artisan instruction in Russia, acquired its right to recognition in com-

¹ As is stated by Mackenzie Wallace in his admirable work on Russia, "the Russian educated classes are extremely impulsive," "are fettered by no venerable historical prejudices, and are wonderfully sensitive to the seductive influence of grandiose projects, especially when they excite patriotic feelings."

² The artisan class forms the connecting link between the town population and the peasantry.

³ Digest of M. Anopoff's books, prepared by Mr. Edmund Noble, of Boston, Mass.

paratively recent times. From the earliest period our Government has endeavored to improve general education and spread it among the people, but middle and low grade technical and industrial education (not taking into consideration the Practical Technological Institute at St. Petersburg and the Imperial Technological School at Moscow, later merged into higher educational establishments) did not begin earlier than a quarter of a century ago. Nor is this statement discredited in any way by the fact that prior to that time there existed some low, middle, and special high grade educational establishments, since such establishments existed for purposes which, with a general resemblance, differed much in detail from those that constitute the essence of technical and industrial education. The explanation of this must be sought in the fact that these establishments, belonging as they did to different governments, were made to answer to the needs of each government, and in the further fact of the lack of a unified system of general education. The only exceptions to the narrow and special character of the above-named establishments were afforded by the special extra classes and commercial divisions of the Realschools (changed from Real gymnasia by edict of May 15, 1872) and by the second-class and first-class village, district, and city schools (edict of May 31, 1872).

Twenty-five years seems a very short period in which to establish the general work of popular education on a firm footing and to achieve the results anticipated by the promoters of the work, yet the statistics afford abundant proof of the development of technical and industrial education, and of its spread to the remotest parts of the Empire. This success in educational work is due to several causes; to the zeal of the Government in carrying it on; to the industrial progress made by the country; and, finally, to the manner in which the efforts of the Government have been seconded by the city and district authorities, by various societies, and by private individuals.

This constant opening of new establishments and the consequent increase in their number soon necessitated some general plan of organization for technical and industrial education, and the task of drawing up such a plan was conferred, by an edict of the Imperial Council of February 21, 1878, upon the ministry of finances. In 1881 an imperial order was issued for the transfer of most of the above-mentioned establishments from the ministry of finances to the ministry of public instruction, in which a special division was formed in 1883 for technical and industrial education. To this special division was given the work of drawing up the general educational programme, and of elaborating measures for insuring a better direction of educational forces generally. The principal regulations for the industrial schools, presented to the Imperial Council by the minister of public instruction, received imperial sanction in 1888, and the minister was instructed to form a special temporary commission from the representatives of the ministries of public instruction, finance, internal affairs, and imperial domains, to indicate the localities in which industrial schools ought to be opened at the expense of the Government, to determine the special subjects which they should teach, and to outline the rules and regulations by which these schools should be guided. This commission met under the presidency of Mr. Ilyin, director of the St. Petersburg Technological Institute, and its work, after being examined by the Imperial Council, received imperial sanction on June 26, 1889.

The new edict for the Realschools, of date 1888, does away with all the special extra departments in them, with the exception of those for commercial education, and in place of these divisions it requires the opening, at Government expense, of technical and artisan schools of the middle and low grades. Though these schools are required to observe the strictly defined plan drawn up for them, they still have the benefit of the results of the long practical experience of existing schools, whose work began and has been carried on under less favorable conditions. A close study of these establishments affords an opportunity to borrow the most beneficial features from them and to save the new schools from the errors which interfered with the development of the older schools.

Any adequate review of existing middle and lower grade technical and industrial educational establishments in Russia can not be limited to incidental facts and partial descriptions; it must present the amplest and most exact details regarding the schools; it must fully describe each of them, showing the results reached and the causes that interfere to prevent normal and further development. With these ends in view special attention is given to the history and growth of the various schools as well as to the interest shown in them by local societies, since it is to these societies, as well as to individuals, that the educational establishments referred to owe their origin and often the contributions necessary to carry them on. The present sketch deals only with boys' schools of higher, middle, and lower grade which have been founded to prepare artisans and factory workers. In other words, it has as its object the study of those new schools whose beginning dates back to the sixties, but which have up to the present failed to supply any positive and definite answers to the questions put to them regarding the degree of success they have attained in carrying out the objects for which they were founded.

The whole of the above-mentioned establishments for technical and industrial education are divided, according to the objects they have in view, into five groups:

FIRST GROUP.

The technical schools, whose course is that of the middle grade educational establishments. They resemble the Realschools, and have special departments according to the edict of 1872, but differ from them in giving greater prominence to professional studies. These technical schools make the same demands upon pupils as do the Realschools, and have a course whose period extends from six to eight years. Their aim is to provide the lads entering them with a general education, and also with that amount of technical and commercial knowledge which is necessary to qualify them for positions as assistant engineers or for acting as foremen in any of the smaller industrial enterprises. Those who pass through the full course in these schools have the right to enter the high special educational establishments on the same footing as the pupils of the gymnasia and the Realschools; while in the matter of military service, they enjoy the privileges of the pupils of the educational establishments of the first two ranks.¹ The pupils, besides taking part in the class studies, occupy themselves in the mechanical workshops or the chemical laboratories; considerable importance is also given to inspection of factories and practice in them during the summer vacations. To this first group belong, strictly speaking, only three schools: I, the high-grade artisan school at Lodzi; II, the technical school at Irkutsk, and III, the Kommissaroff Technical School at Moscow.

To the list of the middle-grade technical schools, however, may be added the establishment at Omsk and Kungursk, though the imperial edict classifies them with schools here placed in the second group. Yet in reality the Omsk and the Kungursk establishments differ from the schools of Cherepovetz, Simbirsk, and a few others, inasmuch as they require from pupils seeking admission proficiency in the course either of the city schools (edict of May 31, 1872) or of the district schools, while the other middle-grade technical establishments demand from pupils a mere knowledge of the course of the primary schools. There is also the difference that, while at Omsk and Kungursk the pupils are taught the full course in algebra and trigonometry, these subjects do not enter into the course of the other schools, which in their general aims resemble the low-grade technical schools. The school at Lodzi, during its twenty years of existence, has educated 287 pupils, while the school at Irkutsk, during a period of seventy-six years, has graduated 91 pupils. If to these totals we add the 38 pupils graduating from the Komissaroff and Omsk schools, we shall find that in a period of seventeen years these four educational establishments prepared about 450 young men, who have since aided in the development of the national indus-

¹Described on page 199.

tries. About 35 per cent of the graduates are continuing their education, or have already completed it, at the high-grade special educational establishments; 40 per cent are engaged in various trade and industrial enterprises, while 25 per cent have turned aside from the special occupations for which the school fitted them to other callings.

SECOND GROUP.

To this group belong educational establishments in which such subjects of general education are taught as are found in the programmes of city, district, and two-class village schools. For admission to these establishments the knowledge demanded is such as is given in the lower elementary schools, the course occupying from four to six years, according to the information possessed by the pupil at his entrance. In the matter of military service, pupils are given the privilege of the third rank,¹ with the exception of the Nicholas Artisan School at St. Petersburg, which enjoys still higher military privileges. The programme of subjects, so far as general education is concerned, is not fuller than the programme of the city schools as settled by the edict of May 31, 1872; but in addition to such general educational subjects, there are taught in the schools of this group physics, mechanics, the technology of metals and wood, bookkeeping, and other special subjects; the study of drawing and drafting also occupies a conspicuous place in the curriculum. It is the aim of these establishments to prepare master workmen for the factories, specialists in the ruder kinds of mechanical work, machinists, and draftsmen. A graduate from one of these schools has no right to enter the high special establishments, although the wide scope of his study leads him to desire to extend his education. In the greater part of the establishments there are systematic courses for the study of cabinet-making and carving. The cost of maintaining such courses is very great, and so, owing to want of means, the pupils learn their trade by doing work for customers. Many of the pupils after graduating enter the low-grade schools as teachers of trades, and so the establishments of this group, though not designed to prepare teachers of trades, and not having special classes for this purpose, yet seem to discharge the function of seminaries for the preparation of instructors in trades. A large number of these establishments often have boarding pupils. To this group belong the Alexandrovsky Technical School in the city of Cherepovetz, the Artisan School of Count Orloff-Davidoff in Simbirsk, and the Czarevich Nicholas Artisan School at St. Petersburg; also the various technical railroad schools of the country, but as these latter are under the control of the minister of ways of communication, and by being restricted in their aims, satisfy the needs of the railroad service. The description of them does not enter into the object of the present work.

THIRD GROUP.

This group includes the artisan schools, with a curriculum of general educational subjects which resemble that of the elementary schools, and sometimes approaches in character the course of the two-class village schools. The majority of the schools of this group receive pupils who have graduated from the elementary schools. The establishments in this division are founded for the purpose of preparing master workmen in the "bush" or domestic industry, in the various industrial occupations of the village, and in factories. They give instruction in cabinet-making, blacksmithing, carpentry, carving, tailoring, shoemaking, bookbinding, harness-making, etc.; but only a very few of them can pretend to any systematic teaching of the trades, and the pupils learn their business by requesting orders from customers. They utilize the summer vacation by occupying themselves in the workshops during that period. In Group II delicacy of finish in the work done is indispensable, but in the present group it is not insisted upon. Boarding establishments exist in con-

¹ Described on page 199.

nection with only a few of the schools; in the majority the pupils are day scholars. This group includes the artisan schools of Kazan, Orenburg, Kishineff, Irbit, etc.; also artisan schools under the control of various charitable societies, such as those in Vladimir, Nizhni-Novgorod, Tver, etc.; further, such model workshops as that at Tamboff, the Birskey Technical school, and so on.

The schools of second and third groups, while resembling each other in their aims, vary greatly in their organization, as well as in the character of the general and special education which they give. One meets among them, in fact, very different types of educational establishments, beginning with the low-grade technical schools and ending with the practical artisan workshops, without any provision for class instruction, even in writing and drawing. During the educational year 1888-89 the schools of these two groups expended no less a sum than 875,000 rubles (\$488,250) in educating over 5,000 pupils, about 2,000 of whom were boarding pupils. The pupils were prepared for the various trades in the following proportion: For blacksmithing, 45 per cent; foundry work, 1.5 per cent; lathe turning, 1 per cent; blacksmithing, 3 per cent; cabinetmaking, 28 per cent; wood-carving, 2 per cent; shoe and harness making, 6 per cent; tailoring, 1.5 per cent; bookbinding, less than 1 per cent. About 4,433 pupils passed through the course, distributed, by trade, as follows: Locksmiths, 45 per cent; cabinetmakers, 20 per cent; shoemakers, 4 per cent; tailors, 0.15 per cent; bookbinders, 0.8 per cent.

FOURTH GROUP.

To this group belong the various special and general educational schools for adults, such as the building school, the school of printing, the evening and Sunday special classes of the Imperial Technical Society of St. Petersburg, and the artisan school at Riga. Instruction is given in the evenings and Sundays, when the working men are not occupied. Those who successfully pass through the course are entitled to the privilege of third or fourth rank¹ in military service, according to the degree of education received.

FIFTH GROUP.

This group includes the general educational low-grade establishments, comprising elementary, district, and city schools, with the extra "artisan" departments attached to them.

In order to increase facilities for technical and artisan education in Russia, the Minister of Public Instruction in 1872 transformed the Realgymnasias into Realschools with special complementary classes, and almost simultaneously introduced instruction in trades into the teachers' seminaries and into the low-grade schools. The regulations for the city schools (dated 31st of May, 1872) provide that pupils in such schools, when their parents desire it, may occupy themselves with trades like bookbinding and wood carving, with a view to the development of technical skill. The regulations also contain the following provisions: "When societies or private individuals in cities intimate their willingness to defray half the cost of practical instruction in trades and arts at the city schools, the Minister of Public Instruction will communicate with the Minister of Finances with a view to the granting of a subsidy for such purpose to the amount of not more than 300 rubles (\$167) a year for each school." In the instructions issued by the Minister of Public Instruction (June 4, 1875) for the two-class and one-class village schools the following provisions occur: "Into the one and two-class schools, according to the means which they may have at their disposal, is introduced the teaching of trades and arts for boys and handiwork for the girls. In schools where the necessary facilities exist the pupils may also be instructed in kitchen and market gardening. One-class and two-class schools are opened by the Minister of Public Instruction in those locali-

¹ Described on page 199.

ties outside cities where societies or private persons undertake to provide a certain amount to defray the cost of instruction and materials, such amount being supplemental to the grant made by the Government; but where local societies and private persons fail to make up the sum needed the Minister of Public Instruction may assign a further amount, equal to from 100 (\$55) to 140 rubles (\$78). Instruction in trades and arts is placed in the hands of the state inspectors of people's schools or of competent persons approved of by them. Instruction in the trades and arts is paid at the rate of 160 rubles (\$89) annually in the two-class and 140 rubles (\$78) in the one-class schools. The choice of the particular trades, arts, and handiwork to be taught at any school is left with the local society and the state inspector, while occupation in such branches is obligatory only for those children whose parents or representatives desire it. All tools and apparatus necessary for the teaching of trades are to be purchased by the inspector, in consultation with the instructor, at the cost of the local promoters of the school, who are also expected to meet the expense of renewing such tools and apparatus. "Money received from the sale of work done by pupils is to be applied to the purchase of workshop materials, any residue being turned over to the reserve funds of the school. If a school has no workshop, the necessary facilities must be provided; but work must not be done in the classrooms, even when the lesson is being given. The pupils are to receive their instruction in trades or handiwork at times when they are free from lessons, and they must be taught either all together or in divisions on different days, according to the size of the rooms, the number of the tools, and the quantity of the materials available. Only children who attend school are allowed to participate in the occupations of the workshops. The tools and materials used are regarded as the property of the school. Instructors must be present in the workshop or at the trade and handiwork classes, relieving one another as may be necessary. In schools which have an honorary trustee, that official may watch over the industrial occupations of the pupils, if he so desires. The number of hours during which instruction shall be given is left to the honorary trustee, the teachers of the school, and the instructors in the trade desired. When possible, each school ought to have connected with it a garden or kitchen garden and a beehive, for instruction of the children, when out of school, in gardening and beekeeping, though this is at the option of their parents or guardians."

In accordance with these provisions, artisan departments were opened in the city schools (edict of May 31, 1872) and in the primary schools, the number being as follows: In the district schools—7 in 1881, 11 in 1882, 10 in 1883, 48 in 1884; in the city schools—28 in 1882, 31 in 1883, 37 in 1884; in the primary schools—573 in 1881, 638 in 1882, 814 in 1883, and 747 in 1884. In the year 1885 there existed 217 district schools, with 16,969 male pupils, of whom 2,524 graduated and 3,683 left before finishing the course. There were also 85 two-class city schools and other establishments having the rights of district schools, with 5,068 male pupils, of whom 672 graduated and 1,304 left school before finishing the course. There were in the same year 321 of the city schools established under the edict of May 31, 1872, and these were attended by 38,919 male pupils, of whom 2,234 graduated and 8,097 left school before finishing the course. The artisan classes in all these 623 schools numbered 85. Each district school had an average of 78 pupils, of whom 17 graduated. Each city school averaged 121 pupils, but owing to the fact that many of the city schools were but recently opened, there has been practically no time for graduation. Of the number of those who left school from the above-mentioned establishments 30 per cent were graduates.

On January 1, 1885, there were 24,209 primary schools in existence, including 23,404 one-class and 805 two-class schools. The attendance included 1,466,913 pupils of both sexes—94,589 at the two-class establishments and 1,372,324 in those of one-class. In other words, each two-class school had 117 pupils and each one-class school 58. Of the total number of pupils the boys constituted 79 per cent, or 1,152,516, and the girls 21 per cent, or 314,397. The boys in the village schools num-

bered 1,034,634 and in the city schools 117,882. Those graduating in 1884 numbered 118,829, or 8.1 per cent of the whole number of pupils. This remarkably large percentage of pupils who leave school without graduating—and do so in increasing numbers, despite the fact that graduation confers privileges in connection with military service that are highly valued among the village population—is to be explained not by the indifference of the villagers to education, but by such domestic and economic conditions as make it impossible for the peasant to keep his children at school during the three or more years necessary for the course.

NAMES OF THE SCHOOLS.

The names¹ of the schools described in detail by M. Anopoff's report are as follows:

First group.—High-grade Artisan School, at Lodzi; Technical School, at Irkutsk; Kommissároff Technical School; Omsk Technical School; Kungúrsky Technical School.

Second group.—Alexander Technical School, at Cherepovetz; Artisan School of Count Orloff-Davidoff, at Simbirsk; Czarevich Nicholas Artisan School, in St. Petersburg; Kulebínsky Artisan School; Mikháilovsky City School, at Tiflis; Gen. Máltseff District Artisan School, at Vladimir; Count Laris Meltkoff Artisan School at Vladi-Kavkas; Alexander Artisan School, at Saratov; Deghterévsky District Artisan School; Maklakoff Artisan School, at Putive; Mikhailovsky Artisan School, at Stavropol; Russian Imperial Technical Society's Artisan School for mechanical work; Hebrew Artisan School of the "Labor" Society, at Odessa; Mikháilovsky Professional School, at Elizavétpol; City Artisan School, at Kharkoff; Popoff Artisan School, at the Nicholas-Bolshesolsky two-class school in the government of Kostromia; St. Petersburg Artisan School, at Okhta; Hebrew Artisan School, at Dunaburg; Michael Konarsky Three-class Artisan School, at Warsaw; Locksmiths and Artisan School of the Moscow Society for the Spread of Technical Knowledge (under imperial patronage).

Third group.—Alexander Second Artisan School, at Kazan; Artisan School of the Society of the Benevolent cent, at Tver; Artisan School, at Irbit; Alexander Artisan School, at Kishineff; Model Artisan workshops, at Tamboff; Keen's Private Artisan School, at Warsaw; Artisan School, at Orenburg; Koroleff Artisan School, at Tomsk; Artisan School, at Kertch; District Artisan School, at Viatka; Artisan School, at Zakatály; artisan classes at the Primary People's School in Moscow, maintained by Madame Morozoff; Artisan School, at Sebastopol, supported by the Russian Steam Ship and Trading Society; Artisan School of the Port of Nikoláevsk; Reshetofsky Artisan classes at the Children's Asylum in Tver; District Artisan School, at Malmwyzhsk; Kief Benevolent Society's Artisan School; Artisan School at the Baltic Iron Ship-building Factory in St. Petersburg; Artisan School, at Smalensk; Trapeznikoff Artisan Educational Establishment, at Irkutsk; Madame Kauslina's Children's Artisan Asylum, at Mosalsk; Artisan School, at Krasnoslobodsk; District Artisan School, of Birs; Shvedzoff Artisan School, at Penza; Educational Workshops of the Society of the Benevolent cent, at Wilna; Yakovleff Artisan School, at Turgāi; Alexander Artisan Parish School, at Ufa; Menkoffsky Artisan School, at Sebastopol; City Artisan Asylum, at Vitebsk; Artisan School, at Tobolsk; Artisan School, at Kolumna; Artisan School of the American Church Society, at Astrakhan; Artisan classes at the Savinsky People's School, in Kobwyzhek; Alexander Artisan School, in the village of Kokhureshta (government of Bessarabia); District Artisan School, at Nagaïsk; Artisan School, at Matchkassy; District Artisan School, at Saksagan; Pottery School, at Chinyesheutsk; Kommissaroff Artisan School, at Kotyelnich; Artisan School, at Zuya; District Artisan School, at Chembar; Artisan School, at Pskoff; Alexander Artisan School, at Samara;

¹A complete list of these schools is given because they indicate so clearly in what divisions of the Empire the work of technical and industrial training is being carried on.

Ataman Technical School, at Novochevsk; artisan classes at the four-class city School, in Aleshki; City Artisan School, at Archangel; Alexander II Artisan School, at Astrakhan; Artisan School of the Benevolent Society, at Astrakhan; Artisan School, at Gorki; Artisan School, at Yelabuga; Artisan School, at Libidin; Artisan Grammar School, at Elizavetsgrad; cabinet-maker's workshop, at the Abramtseff Primary People's School; Alexander II Artisan School, at Kovno; Military Artisan School, at Novochevsk; Artisan School, at Ludinoff; Artisan School, at Kozelsk; Artisan School, at Novomayachka; Educational Workshops, at Yuria and Kamgort; Alexander Artisan School, at Kiev; Artisan School, at the Alexander Asylum for Children, in Nizhni-Novgorod; Artisan Grammar School of the Charitable Society, at Vladimir; Professional Department of the City School, at Batum; Hebrew Primary School with artisan department, at Minsk; artisan department of the Vungsky Village School, in the government of Archangel; class for the teaching of carving on bone, at the Lomonosoff Village School, in the government of Archangel; Artisan Asylum of the Charitable Society, at Vologdá; Artisan School of Riazan.

Fourth group.—Schools and classes for working men under the supervision of the Russian Imperial Technical Society; Artisan School, at Riga; School of Building (place not stated); School of Printing, at St. Petersburg; School for Children of Journeymen and Master Workmen, at Ivanovo-Voznyesensk; Sunday Drawing Class and Sunday Commercial School, at the High-grade Artisan School in Lodzi; drawing classes at the School of the Imperial Society for the Encouragement of Art; drawing classes at the Stróganoff School for Technical Drawing; drawing classes of the Baron Steglitz Central School for Technical Drawing in St. Petersburg; Drawing class, at Warsaw; drawing technical classes at the City School, in Pskoff; Free Classes of Technical Drawing of the Society for the Spread of Technical Knowledge, at Moscow.

Fifth group.—Artisan departments established by the edict of May 31, 1872, in the city schools and the two-class and one-class village schools.

The cost of maintaining these people's or elementary schools in 1885 was 12,764,496 rubles (\$7,122,588). To this amount there was contributed: From the state treasury, 9.2 per cent; from the cities, 17.9 per cent; from village societies, 24.6 per cent; from district assemblies (zemstvos), 35.8 per cent; by donations, 7.6 per cent; from school funds, 2.5 per cent; from other sources, 2.4 per cent. Up to January 1, 1885, there existed, in connection with the people's schools, 747 artisan departments, distributed among the various educational circuits as follows: St. Petersburg, 86; Moscow, 145; Kharkof, 56; Kazan, 58; Vilna, 40; Kiev, 87; Odessa, 142; Orenburg, 57; Dorpat, 19; Caucasus, 57. The inspectors of the educational circuits point out that progress in artisan instruction in the people's schools is slow owing to the fact that the pupils are for the most part between the ages of 8 and 11, and they are, in fact, too young for the heavy work of trade occupations. Moreover, in some localities, the peasants do not approve of instruction in trades in the schools on the ground that when their children acquire trades in this manner their knowledge draws them away from the village—where they are needed to cultivate the land and take part in field work—to the workshops of the city, where they can earn money, a migration which, in view of the smallness of peasant families is held to be ruinous to agriculture.

The number of low-grade schools with artisan departments, and the attendance in the various educational circuits were enumerated in 1888 as follows: Moscow, 110 schools and 2,621 pupils; Caucasus, 81 schools and 1,771 pupils; Odessa, 78 schools and 1,723 pupils; St. Petersburg, 101 schools and 1,384 pupils; Kharkof, 42 schools and 989 pupils; Kazan, 49 schools and 764 pupils; Orenburg, 35 schools and 660 pupils; Vilensk, 32 schools and 551 pupils; Kiev, 13 schools and 267 pupils; Turkistan, 8 schools and 210 pupils; West Siberia, 11 schools and 161 pupils; Warsaw, 4 schools and 127 pupils; Eastern Siberia, 1 school and 10 pupils. The total number of artisan departments and the number of pupils learning various trades in these schools were as follows: Cabinetmaking, 289 departments and 4,875 pupils; carpentry, 1 department and 15 pupils; wood-turning, 6 departments and 64 pupils; wood-

carving, 2 departments and 25 pupils; blacksmithing, 62 departments and 858 pupils; bookbinding, 116 departments and 1,410 pupils; shoemaking, 165 departments and 2,567 pupils; tailoring, 17 departments and 271 pupils; hat-making, 1 department and 15 pupils; tannery, 1 department and 6 pupils; harness-making, 4 departments and 62 pupils; coopering, 6 departments and 84 pupils; rush and cane plaiting, 2 departments and 26 pupils; painting and glazing, 2 departments and 23 pupils; silk-worm culture, 38 departments and 365 pupils; different kinds of horticulture, 43 departments and 556 pupils; grape-growing and wine culture, 1 department and 16 pupils.

The learning of trades in these schools is not obligatory, and the number of working hours varies from one to twenty-four a week, depending on the amount of accommodation and the means available. Instruction in trades has to be often given in half-lighted rooms, while in some cases the trade lessons have to be taught in the kitchen of the schoolmaster's house. On the other hand, there are schools which possess a fine equipment for the purpose. The summer vacation is, for trade instruction, a period of activity or inactivity, according to circumstances. Some of the schools spend not more than 50 or 60 rubles (\$27 to \$33) annually in the teaching of trades, while others expend 200 rubles (\$111) and upwards. Trade instructors receive from 50 to 480 rubles (\$27 to \$267) a year. Some of the schools teach trades gratis, and this is especially the case in bookbinding, which is often taught by the schoolmaster himself. The productive yield of the school workshop varies greatly; at times it amounts to as much as 1,000 or 2,000 rubles (\$558 to \$1,116). There is a great lack of method in the teaching, and it is very difficult to obtain competent instructors, so difficult, in fact, that in some cases artisan departments have had to be closed. This was the case in Vologdá, Kursk, and a few other governments. In many of the schools pupils in the artisan departments receive a share of the profit yielded by the workshop, an arrangement which keeps the bigger boys at school much longer than they would otherwise remain, since without the inducement named they would, after acquiring a mere elementary knowledge of their trade, seek occupation in private workshops.

In Mr. Anopoff's report the question is fully discussed as to whether the complementary artisan departments opened in the low-grade educational establishments accomplish their purpose, and the answer is given in the negative. The defects of the system, as pointed out in 1884 by one of the directors of the people's schools, are as follows: (1) The pupils are too young to acquire trades; (2) the educational course is too short to give anything like thorough instruction in trade; (3) the hours given to trade instruction each day, being limited by the general educational work to the afternoon, are too few in number; (4) the nonobligatory character of the instruction leads to a constant decrease in the number of pupils, and causes the workshops to be regarded by the boys as a place for diversion rather than for instruction; (5) parents evidently take the same view of the trade work of the schools, since after boys have gone through the general educational course, they are generally withdrawn without being allowed to enter the school workshops.

In bringing this sketch of the artisan work in low-grade schools to a close Mr. Anopoff remarks: "We can not help expressing our regret at the unfavorable conditions in which they are placed. They are in the majority of cases under the control and direction merely of the state inspectors and teachers of the people's schools; that is to say, of persons who have no special knowledge of the teaching of trades, and thus have to leave everything to the trade instructors. Yet, in those exceptional cases where the state inspectors and school-teachers had the requisite knowledge of trade instruction, the artisan departments in the schools gave quite different results." As a remedy Mr. Anopoff finally suggests the placing of the artisan departments under expert instruction and guidance.

Typical schools.—The Lodzi (Warsaw) high-grade artisan school, belonging to the first group, is a transformed Realschool of six classes. It is to provide, for lads who

receive their preliminary general education in the lower classes of the school, such special training in its higher classes as will fit them for such artisan and industrial work as is demanded by varying local conditions. The length of the course is six years. Children who can read and write Russian, repeat the principal prayers, and are familiar with arithmetic as far as addition, subtraction, multiplication, and division are concerned, are received in the first class if they are not younger than 10 years of age. The first three classes are taught religion, Russian language and literature, history of Russia, German language, universal geography, geography of Russia, zoölogy, botany, mineralogy, arithmetic, algebra, geometry, calligraphy, drawing, and drafting. The three higher classes learn, in addition to the subjects named, trigonometry, lineal geometry, commercial correspondence, accounts, physics, chemistry, chemical technology, instruction in machines, mechanical technology, weaving, spinning, and dyeing. The pupils of the school may be divided according to their religious belief, as follows: Orthodox Greek, 5 per cent; Roman Catholics, 45.5 per cent; Lutheran, 38.5 per cent; Hebrews, 11 per cent. The number of pupils in attendance at the opening of the school was 147; this gradually increased until at present, counting those who attend the "parallel" departments in the four lower classes, the number is 330. Of the 1,324 persons who entered the school during the twenty years of its existence, 287, or 21.6 per cent, graduated; 710, or 53.6 per cent, left before finishing the course; the remaining 25 per cent are still at school. Of the 28,000 rubles (\$15,624) annually given to maintain the school, 21,000 rubles (\$11,638) are contributed by the Government, 1,380 rubles (\$770) by a special fund, and 5,000 (\$2,790) by the city society. Placing the annual average of pupils at 340, the cost of maintenance amounts to about 77 rubles (\$42) for each year; while if we divide the 500,000 rubles (\$279,000) spent in maintaining the school since its foundation among the 287 pupils which it has graduated, the result will show an annual expenditure for each pupil of 350 rubles (\$195).

The Alexander Technical School at Cherepovetz, belonging to the second group, was established in 1868 by the brothers Milutin, received a state subsidy of 7,000 rubles (\$3,906) annually to the year 1871, and two years later came under the complete control of the government. The aim of the school, as defined by regulations of March 27, 1884, is to train pupils to become master locksmiths, cabinetmakers, machine-makers, machinists, and factory draftsmen. The school is under the control of the department of trade and manufactures; its director is appointed by the minister of finance from the successful graduates of the high-grade technical educational establishments. The cost of maintaining the school is defrayed partly by a government subsidy of 40,000 rubles (\$27,860) annually, and partly by an annual appropriation of 3,850 rubles (\$2,148) obtained from a fund established to provide scholarships. It is also maintained in part by pupils fees, by the sale of the industrial products of the school, and by donations. The pupils are divided into day and boarding pupils. They either pay for their education, or are instructed and maintained free of cost, according to circumstances. The full course is six years, four of them being devoted to theory and practice in the industrial branches taught, and the remaining two to acquiring proficiency in some special line of work. Those who are to become master machinists enter the government factory connected with the school, while others may avail themselves of practice on board the steamboats during the season of open navigation. The pupils enter the lowest class from 12 to 14 years of age, the conditions of entrance being a knowledge of the catechism and Biblical history; the power to read the church texts and write in Russian without many errors; a knowledge of elementary arithmetic in its first four divisions. The branches taught are religion, Russian language, geography, arithmetic, history, elements of physics, mechanics, the technology of metals and wood as applied to the construction of machines; instruction in building materials, drafting, drawing, calligraphy, gymnastics, and singing, the latter being an optional subject also. On the practical side the pupils are instructed in lock and cabinet making, as well as

blacksmithing, and they are instructed how to produce various articles of industry. The number of pupils received from 1869, the date of the opening of the school, to 1882 was 421. In the year 1888 there were 100 boarding pupils in the school, each paying 180 rubles (\$100) a year, in addition to an entrance fee of 20 rubles (\$11), and 75 day pupils, paying 12 rubles (\$6.69) a year. Each boarding pupil costs the school 330 rubles (\$184) and each day pupil 160 rubles (\$87) annually.

The Alexander artisan school at Kazan, belonging to the third group, was opened January 20, 1881, its object being the intellectual, moral, and industrial education of artisans. The length of the course is six years; those who graduate receive the title of under-master and enjoy privileges of the fourth class as regards military service. In addition to trades, the pupils learn the following subjects: Religion, Russian language, arithmetic, calligraphy, elements of Russian history, geography, and natural history. The trades taught are: Cabinetmaking, leatherwork, wood-carving, lock-making, blacksmithing, tinkering, shoemaking, and tailoring. The instruction in these branches is mainly practical and those who acquire cabinetmaking, locksmithing, lathework, and blacksmithing also learn drawing and drafting. Thirty-six hours every week is given to the learning of trades. The pupils were divided according to age in 1888 as follows: There were 7 from 12 up to 14, 45 from 13 to 16, 40 from 16 to 18, 11 who were 18 years old, and 3 over 19. Sixty per cent of the total number of pupils belonged to the city population, 11 per cent were the children of peasants, 26 per cent were from various classes of the people, while 10 per cent represented the privileged classes. The school spends annually in its work about 6,000 rubles (\$3,348), divided as follows: Inspector, 1,000 rubles (\$558); teacher of educational subjects, 550 rubles (\$306); lessons in drafting, 200 rubles (\$111); ten instructors of trades, 2,800 rubles (\$1,562); establishment expenses, 150 rubles (\$83); materials and instruments, 600 rubles (\$334). The cost of instruction does not exceed 58 rubles (\$32) annually for each pupil, while the cost per pupil for the six-year course is about 350 rubles (\$195). The cost of maintaining the school is defrayed by the following annual contributions: From the local society, 5,000 rubles (\$2,790); fund for providing poor pupils with scholarships, 500 rubles (\$279); from the municipality, 500 rubles (\$279). Instruction is gratis to pupils living in the city; to pupils coming from other towns a charge is made. The school is under the control of the city council, the actual direction of it being in the hands of a committee of five trustees, three being chosen by the municipality and two by the city residents.

The artisan school at Riga, belonging to the fourth group, arose out of the initiative of the Industrial Society of Riga (Gewerbe Verein), an organization started in 1866 for the moral, intellectual, and industrial improvement of its members. Having become aware of a gradual lowering of the moral tone of the Riga artisans, and of the bad quality of much of their work, the above-named society petitioned for the foundation of a school in which artisans could be trained in the evenings and on Sundays, and the result was the opening of the Riga artisan school. The edict establishing this school was promulgated on December 3, 1875. This school, in which instruction is given on week-day evenings and every Sunday morning, has two departments, the preparatory and the special. The first consists of four classes with a one-year course, the second of three classes, and there is also a high special class with a two-years course. The subjects taught in the preparatory department correspond with the course of the primary schools, while in general educational subjects the course of the special department corresponds with that of the district schools. Pupils entering the preparatory department must not be younger than 11 years; those entering the special department must indicate proficiency in the subjects taught in the preparatory department. The pupils in the higher classes are divided according to their trades into three departments: (1) Workers in metal; (2) cabinetmakers; (3) carpenters and builders. The statistics for 1888 show the ages of the pupils to have been as follows: From 12 to 14 years, 15 per cent of the pupils;

32 per cent from 14 to 16; 42 per cent from 16 to 19; 11 per cent from 19 to 31. According to occupation, the pupils were divided thus: Cabinetmakers, 10 per cent; carpenters, 10 per cent; painters, 10 per cent; locksmiths, mechanics, and blacksmiths, 25 per cent; printers, 10 per cent; shoemakers and tailors, 10 per cent; masons, 25 per cent.

The school is in charge of a commission chosen by the Artisan Society, and is supported from the funds of that society and by contributions from various outside sources. The amount contributed for its support from outside sources in the year 1887-'88 amounted to 11,932 rubles (\$6,658) in which is reckoned 1,750 rubles (\$976) received as tuition fees. The pupils pay from 3 to 5 rubles (\$1.67 to \$2.79) a year for their training in the preparatory department and 8 roubles (\$4.46) annually in the special department. The poorer pupils are instructed gratis. The pay of the instructors in general educational subjects for the year named was 30 rubles (\$16.74) each and that of the trade instructors 37½ rubles (\$21) each.

Such are the main details in regard to the intermediate and elementary, technical, and industrial institutions as presented by Mr. Anopoff; and in conclusion it may be said that in the twenty-five years to which Mr. Anopoff refers these schools have spread to the very confines of the Russian Empire.

REPORT OF FIRST TECHNICAL AND PROFESSIONAL CONGRESS.¹

The first congress of Russian educators engaged in technical and industrial instruction in Russia, held at St. Petersburg during the month of January, 1890, opened with an exhibition of school methods and material, presided over by Mr. Ivan A. Anopoff, director of the Nicholas Artisan School. The congress proper, under the presidency of Mr. N. V. Isakoff, was opened on January 7 by the minister of public instruction, Count Jvan Davidovich Delianoff. Its work was transacted in a general session of the congress and in five divisions, to each of which some special subject had been assigned. In the general session Mr. A. K. Nebolsin read a paper on "Periodical exhibitions and congresses in the interest of technical and industrial education." In the divisions the following topics were discussed: (1) General pedagogical questions, such as school hygiene, factory, artisan, and commercial education; (2) middle and lower technical and artisan educational establishments and instruction in navigation; (3) instruction in farming and mining; (4) professional education of women; (5) manual training in the schools.

Mr. A. K. Nebolsin, in his paper before the general session, said: "The best way to prepare the peasant and artisan classes for industrial education is to secure that general dissemination of elementary instruction which is now so much needed in Russia. To this end the most energetic action should be taken both by the Government and by society at large. Until a recent period the Government took no part in the establishment of industrial schools, limiting itself to the function of providing them with rules and constitutions or of giving subsidies to persons founding such schools. Only in very exceptional cases did it ever take these establishments under its own control. The industrial schools, arising from private initiative, without any general plan and often modeled on foreign institutions, have thus had many difficulties to contend with, and the attempt to establish them on a firm footing has been attended with much waste of time, money, and labor. The very Gov-

¹Digest of a Russian report by Mr. Edmund Noble, Boston, Mass.

ernment establishments which were to control them were in no better condition themselves. But in 1888 a Government edict opened up a new era for technical education in Russia. This edict, which made the technical and industrial schools Government institutions to be supported not only by private means but also out of the public purse, provides that there shall be three types of technical schools, known, respectively, as the "artisan schools," the "lower technical schools," and the "middle technical schools," fixes the order of their establishment, conditions of scholarship, and programme of education, besides defining the rights and privileges of teachers and pupils. Much as we welcome this edict it is to be hoped that the work of the schools may not suffer from bureaucratic influence. The aim of every technical school is to raise the economical condition of the people among whom it is founded; but the character and circumstances of people vary so greatly that it will be necessary to vary the rules and methods so as to make them suit different localities. Attention to local differences should be the special study of persons in charge of such schools. It has been proposed to limit these establishments to the preparation of workers in wood and metal for situations in factories and workshops; but this limitation is, in my opinion, unwise. The technical schools ought to fit men not only for the factory, but for all kinds of technical work, and thus to enable them to start workshops or trade establishments of their own. Especially in this sense are technical schools needed in those localities where the "bush" or domestic industry is carried on, an industry which has grown to be of great importance for the country people of Russia."

After discussing this paper the congress passed resolutions declaring that its periodical gatherings be held at intervals of not more than five years; that its next sitting take place in Moscow three years from date, and that, in the intervals between the general sessions of the congress, various local conferences be organized.

The sessions of section 1, which were presided over by E. K. Richter, were devoted to discussions in regard to teaching in general, school hygiene, commercial education, and technical drawing.

Prof. Lesgaft, in a report dealing with the relation of physical to intellectual education in the middle and lower schools, urged that both should go on simultaneously, and should be carried on by like methods in the two grades referred to. In the discussion which ensued strong emphasis was laid on the insufficient place given to physical training in modern Russian education. The section, in a formal resolution, admitted the importance of physical education, but confined itself to a declaration to the effect that all elements injurious to physical development of the pupils should be removed from the technical schools.

After hearing reports on the subject of drawing the section resolved, "that the congress petition the Government for the introduction of drawing into all the educational establishments of the Empire, without distinction of sex, as far as the middle-grade schools, and that instructors be provided for the purpose who may enjoy the privileges of Government service."

On the subject of foreign languages it was resolved, "that in the teaching of non-classical foreign languages it is desirable to combine practical aims with a study of the best writers in those languages, and that, as an indispensable condition of success in teaching, the instructors must be thoroughly educated and know the Russian tongue, both theoretically and practically."

The attention of the section was called to the loss of time, to the worry, and to the injurious effect upon the health and nerves of the pupils caused by the present system of annual examinations, and a resolution was passed favoring the new alternative method of repetition during the courses of study. The question of school hygiene was also raised by the special reports of expert oculists, and a resolution was passed declaring that it is desirable to make a periodical examination of the eyesight of pupils with a view to the accumulation of statistics on the subject, and ex-

pressing the hope that before the next congress measures be elaborated for the preservation of the eyesight of students engaged in learning the graphical arts and some of the technical industries.

The question of child, woman, and apprentice labor was also discussed, and measures were suggested for the removal of existing abuses. Prof. Yarotsky urged the improvement of the apprentice system: I, by giving to apprentices the opportunity of attending some midday, evening, or Sunday school; II, by inaugurating an oversight of apprentices in workshops. M. Rakéeff pointed out that the existing law permitted apprentices to be worked for ten hours a day, and that under the present system Sunday work for apprentices had become habitual. He added that there are no regulations to protect the apprentice from work injurious to his health, or from night work generally. It was resolved to petition the Government to bestow upon the Imperial Humane Society, which now has charge of the fund for minor apprentices, the right to carry out all necessary and practicable changes in the relation of apprentices to their employers.

Prof. Isaëff, in a report on "technical education as a means of aiding the 'bush' or domestic industry," pointed to the present extreme exploitation of child labor in this industry, and recommended: I, the introduction into the schools of a course of manual labor adapted to the circumstances of local industries; II, the introduction into pedagogical seminaries and institutes of certain kinds of manual work corresponding with the work involved in the chief domestic industries in Russia; III, the establishment in the large centers of technical schools for training in domestic industry, and also the creation in those centers of museums containing samples of the products of the industry and of the instruments and tools employed in it; IV, the offering of prizes for the best samples of work, and for improvements in the "bush" or domestic industry. The section indorsed all the above recommendations.

After listening to a report on the education of minors in factories, the section passed a resolution asking for the obligatory establishment of schools for minors in connection with all factory establishments, as well as in industrial centers generally, and the obligatory attendance of young workers at such schools. It was proposed to maintain all such educational establishments by means of a tax levied on manufactures.

Then followed a discussion on "school savings banks," and a resolution was passed indicating the desirability of introducing the school savings-bank system into establishments where pupils receive pay for their work.

In connection with the teaching of arithmetic the section decided in favor of maintaining the Schoty, or counting, frame in counting rooms, and it was also resolved to utilize, in the teaching of the knowledge of merchandise, all the chemical and physical knowledge given in the courses of natural science in commercial schools.

Attention was then called to the necessity of raising the standard of scientific knowledge in commercial schools. The establishment of a commercial institute was proposed in which higher training could be given, not only to persons who were needed as instructors in the middle and lower commercial schools, but also to young men who were to conduct the financial and industrial enterprises of the country. In order to illustrate the eagerness of Russian merchants to encourage commercial education the excellent financial condition of all the special commercial schools were adverted to, and it was mentioned that the yearly income of the St. Petersburg commercial school exceeded the expenses of that establishment by 27,000 rubles (\$15,000). Several members of the section considered that the existing schools already supplied all commercial education at present needed, but the section as a whole approved of the establishment of a higher commercial institute.

On the subject of "uniformity of method" the section reached conclusions which may be summarized as follows: "In the matter of general education, it is desirable to have greater uniformity in the plan and programmes of the existing commercial

schools. The appropriation of the plans and programmes of the Realschools can not be regarded as the best means of acquiring such uniformity. The commercial schools must, conformably to their aims, have their own special plans for general education. As regards modern languages and the majority of the special branches, each commercial school must elaborate its own plan and programme, having in view the peculiar conditions and needs of the local trade."

A suggestive report was then read on the "multiplicity of subjects in our educational establishments." The discussions of this subjected to the following statements, viz: "This multiplicity of subjects is the ulcer on the life of Russian technical schools, causing these schools to load a man down with a mass of superficial acquirements but giving him far too little special knowledge."

The explanation of this excessive variety in the programmes of the higher technical schools is attributable to the present condition of Russian industry. In foreign countries there is a natural demand for specialists in this or that branch of industry, but with a less advanced industrial development Russia stands more in need of persons whose education is encyclopedic in character.

A report was then presented which recommended the further development of technical literature, and the section affirmed the necessity of the issue of manuals and text-books of the applied sciences for use in the higher technical schools.

The members of section 2, presided over by Mr. M. E. Kazy, discussed reports in regard to educational establishments in which the art of building is taught and in regard to middle and lower technical and artisan schools. They also discussed the formation of classes for the education of sailors.

In order to place no unnecessary difficulties in the way of popular technical education, it was resolved that the elementary training given by the primary schools should be the only condition of entrance for pupils of the technical establishments. The section also found it desirable to carry on the work of general education in the lower technical and artisan schools, and to instruct pupils in the various methods of working in wood and metal, in order to qualify them for special industries in their several localities. It was further decided to regard as competent teachers of the trades those who, after passing through a course in the technical or artisan schools, have had practice in such trades, or those who, having the necessary practical knowledge, are also familiar with methods of teaching. In order to facilitate the obtaining of a suitable occupation by pupils after leaving the schools, it was suggested that every Russian subject wishing to do so be given the right to open a trade or workshop.

The members of the section discussed at length the present deplorable condition under which the labor of artisans and apprentices is carried on. The conclusions reached may be summarized as follows:

"In order to raise the moral and intellectual status of our workingmen and artisans, they should have an opportunity of attending evening and Sunday schools, in which lectures could be given on general and special subjects. The trade guild of the various industrial centers ought to issue books in which the facts regarding the employment of any minor in a workshop may be entered, as also the dates of his entrance and departure, together with particulars about his conduct. No employer ought to receive any one into his service without being first acquainted with the facts regarding the new comer's previous employment. Trade boards should be established for the purpose of exercising oversight over workshops and deciding disputes submitted by employers and workmen. It is desirable, in view of the irregular and indiscriminate issue of diplomas to chief workmen and subordinates, that such diplomas shall henceforth be granted by special commissions made up of trade experts, and only after public examination of the candidates. Permission to have apprentices shall be granted only to those employers who are known for the excellence of their behavior and morals. The number of apprentices in any workshop ought not to be more than twice the number of the under hands.

Instruction in a trade shall continue for not less than three and not more than five years; the master must treat his apprentices humanely, and set them an example in uprightness of conduct. On no account must apprentices be sent to drinking shops, and if sent, they are not to enter for the purpose of purchasing liquor. Apprentices ought to have special guardians to watch over their interests. Parents who put a boy out as apprentice shall guarantee to the employer the sum of 100 rubles (\$55.80) a year to pay the cost of instruction in case the boy leaves his master. In order that apprentices may be educated, Sunday schools ought to be provided for them, giving an elementary education where needed, and also instruction in trades."

Mr. Nebolsin submitted a report on the best means of educating the children of workingmen. The chief recommendations of the report are as follows: "Obligatory attendance of children up to the age of 15 in schools divided into lower elementary and higher elementary classes. The lower elementary schools are to correspond in their course with the one-class village schools. In the higher elementary schools special industrial subjects may be taught according to the needs of the locality. Each school is to be divided into three classes, with an indeterminate time for the pupil's stay in each. The pupils are to be divided into two groups, consisting of those occupied before dinner and those occupied after it, the time spent at school being for each pupil not less than three hours a day. Tuition is to begin not earlier than 8 o'clock in the morning, and is to continue until not later than 6 o'clock in the evening. The time of beginning and ending of each day's occupation is to depend on the industrial conditions of the locality, but it is desirable that tuition continue during at least ten months in the year." The section adopted all the recommendations of the report, but it expressed no opinion as to the details of the scheme. It also passed a resolution declaring the desirability of opening schools for the education of workingmen throughout Russia and in all industrial centers, and by a further decision expressed itself as in favor of founding chemico-technical schools, electro-technical schools, millers, and weavers' schools. In acknowledging the great utility of middle and lower grade chemico-technical schools, the section expressed its opinion that an elementary course in chemistry should form the basis of the programme in such establishments.

Under the heading of "Marine education" the section discussed "Kinds of navigation," "The necessity of establishing schools of navigation of three types," and "The need of special exhibitions for those schools." After hearing a number of reports the section declared it necessary to have more schools for the teaching of navigation with a higher general course.

The members of section 3, presided over by Mr. V. T. Sobichesky, occupied themselves mainly with questions relating to the teaching of agriculture and mining. Four classes of reports were presented and discussed. 1. Reports showing the necessity of diffusing agricultural knowledge among the people, and suggesting how educational establishments may participate in the work. 2. Reports concerning schools of agriculture in general and dealing with various special branches of agriculture. 3. Reports discussing ways and means of extending a knowledge of agriculture among the people outside the province of the school. 4. Reports on instruction in mining.

Reports were also made in regard to the manner in which primary schools may take part in diffusing agricultural knowledge. The conclusion was that the primary school, supplying, as it usually did, the needs of a population engaged in agriculture, ought to have a model farm as one of its features, and ought to be endowed with the land necessary for that purpose. At the close of a lively discussion on these reports, the section resolved: "1. That it will be advantageous to the people to have the primary school take part in the work of diffusing a knowledge of agriculture. 2. That to accomplish this end it is necessary to give an agricultural character to the text-books and manuals used in the primary schools. 3. That popular text-books teaching various branches of agriculture be introduced into the country

schools. 4. That teachers of such schools should be encouraged to visit model farms and like places for the improvement of their knowledge. 5. That it is necessary to lay out farms either in connection with some of the second-class schools or separately from them, in order that schoolmasters and the people of the locality may have an opportunity of studying, objectively, the practice of agriculture."

The section also decided in favor of imposing the duty upon the elementary schools of diffusing a knowledge of kitchen-gardening, and of establishing an institute composed of ambulatory teachers, with expert gardeners among them, whose work it should be to go from place to place teaching agriculture to pupils in the schools and to the country population generally. Further resolutions on this subject were passed as follows: "1. To the end that agricultural knowledge may be diffused among the people, it is desirable to establish, for the information of schoolmasters, special local courses in agriculture adapted to the conditions and needs of the small peasant estates in each locality. 2. Such courses can be established on the basis of the courses in agriculture, gardening, and bee culture; 'agriculture' being understood to mean the tilling and care of the field and care of the cattle. 3. The most suitable places for the holding of such courses are agricultural and gardening establishments, farms, and nurseries, where experts are to be found. 4. Like courses should also be established on private farms, in private gardens, and in any places which furnish accommodation for students and give opportunities for carrying on practical work, whence it is desirable for the government and the zemstvos to appoint specialists whose duty it would be to establish courses for teachers in different localities. 5. Teaching in such courses must be practical, theory being used merely to elucidate actual work. 6. In order to economize cost, the courses must not exceed ten weeks, but the teachers may remain on the spot longer in order to gain experience. 7. It is desirable that the agricultural societies take these courses under their control."

The question of silkworm culture also engaged the attention of the congress, and the section expressed its full sympathy with the rational steps taken by the Kief and Caucasus educational districts aiming at the development of silkworm culture. It was also considered desirable to introduce this culture into the village schools, wherever the local conditions permit, half the resulting revenue to go to the teachers and half to the pupils. The section also resolved, "That in view of the inexpediency of limiting the teaching of silkworm culture to the primary schools, it is urgently necessary to establish special schools in which this branch may be taught. This is especially desirable in those localities where the silkworm culture has already been developed; in this case it should be made obligatory on pupils to learn the feeding of the worms and the winding of the silk, to the end that the people may be educated into the practical side of this culture." To these resolutions was added one expressing the desirability of courses of instruction in bee culture in those localities where the teachers keep bees.

The following resolutions on the subject of agriculture were passed: "It is desirable that in the higher educational establishments agriculture should be taught, special attention being given to those branches of it that have a direct bearing on the sciences acquired in such schools." "In the middle educational establishments the teaching of agriculture should be carried on simultaneously with tuition in all other natural history subjects, or in such a way as to give the pupil a general knowledge of agriculture before graduating." "Text-books, or manuals of agriculture, should be prepared by the teachers of the high, middle, and lower educational establishments, working in collaboration." "In order to provide that inexpensive education in agriculture which is now so much needed, a special agricultural department should be created in the first-class and second-class primary schools."

In view of the importance of viticulture for the south of Russia and the Caucasus it was resolved to petition the Government to aid private persons and societies in opening establishments for the teaching of viticulture. Such establishments to

have the character of the lower grade schools, with three and four year courses. The section also considered that in the Caucasus viticulture should be taught not only in Russian, but also in the local languages. A further resolution indicated the desirability of establishing extra classes for viticulture in the existing city and village schools in the south of Russia and the Caucasus. The members expressed the opinion that the Government ought to aid establishments where vine culture was carried on, and to open schools in the vicinity of such establishments where pupils could learn to become teachers of viticulture, besides acquiring a general education. For the successful diffusion of a knowledge of agricultural productions generally, the section recommended the establishment of special technical schools for city populations which are in more or less close contact with the peasantry.

The whole question of agricultural exhibitions was discussed, and the section, bearing in mind the essentially educational character of such exhibitions, resolved: (1) That a national agricultural exhibition for the whole of Russia be held in Moscow every ten years; (2) that local exhibitions be held once every five years in important agricultural districts.

The section considered the need of better education for miners, and recommended the opening of schools in mining districts to serve as continuations of the primary schools and to be carried on at the expense of the mine owners.

The work of section 4, over the sittings of which Mr. Y. T. Michailovsky presided, consisted largely of a discussion of questions relating to the industrial training of women. The reports laid before the section had reference to only one kind of woman's work, namely, the work of the seamstress. The information received and the resolutions passed by the congress may be summarized as follows:

The character of the women's schools, in which needlework is taught, varies according to local conditions and demands; in some cases even the age of entering is not fixed. Women seeking tuition in these schools are at present confined to needle and fancy work, and, as the pay of the seamstress is growing smaller and smaller, it becomes necessary to introduce other occupations into the programme of the industrial schools for women. Another fault in such schools is the insufficient elaboration of their programmes. It was shown that persons entering the industrial schools from the elementary schools do so without having received the slightest preparation for the training they seek, and this fact pointed to a serious defect in the efficiency of the elementary educational establishments. At present many persons enter schools, in which sewing and cutting are taught, for the ostensible purpose of teaching, but with the real object of making use of the labor of the children, and the section, therefore, was of opinion that educational workshops should take the place of such schools. On the other hand, it was found desirable to improve the position of the pupils in existing workshops by protective regulation and legislation, defending them from exploitation and insuring the proper hygienic conditions. Courses of short period for the teaching of cutting and sewing were found unsatisfactory, as such courses did not qualify either for practical work or for teaching. The industrial schools, in which handiwork is taught, carry on at the same time the general education of the pupil, and in this respect they have an advantage over the training of the educational workshops, where the pupils have to pick up what they learn by imitating others, and where only the most capable can acquire a knowledge of the business. It was, therefore, deemed advisable to continue general education in the industrial schools, and in the matter of handiwork to teach to the pupil, after her entrance, only the general features of that work, leaving the specialization of the course to a later period. The section decided that there was great need in the provinces for industrial schools of a lower grade than those which now exist, as well as for more educational workshops. In view of the utility in all the trades of drawing, two programmes for the teaching of drawing were drawn up for two grades of professional schools for women. In order to stimulate the development of taste, the section recommended the establishment of museums for the exhibition of prod-

ucts in women's trades and industries. Finding the unsatisfactory state of the instruction in women's handiwork and trades to be due, in general educational establishments and industrial schools, to the lack of properly trained teachers, the section declared it to be necessary to establish courses of instruction for persons desiring to qualify themselves as tutors in such schools, and appointed a committee to elaborate a programme for the purpose. It was also considered desirable to create new educational establishments, in which women may be trained so as to have a wider range of industrial capacity, and so be qualified by a greater command of industrial specialties for more remunerative employment.

A report was then presented by Mrs. L. P. Tamamsheva concerning the women's workshop in Tiflis, where industrial instruction is free. The entrance age is 14, but there is a preparatory class to which girls of 12 and 13 are admitted. At present this workshop is conducted by the city, at an annual cost of 5,000 rubles, \$2,790, but hopes are entertained that it will soon be placed upon a paying basis. It now contains two departments, one for dressmaking and the other for the making of linen underwear. The section resolved, "That in view of conditions making it impossible for the majority of the children of poor parents to enter the industrial schools, and also in view of the extreme cheapness of education in the workshops, it is desirable that women's workshops, like that existing in Tiflis, should be established in various parts of the country."

The following resolutions were also passed: "That guardians should be appointed for the girls graduating from the private industrial schools on a basis corresponding with the social standing of the pupils, and with the conditions of modern industry." "That in the women's industrial schools, with a four years' course, exacting a knowledge of the subjects taught in the primary school course, it is necessary to teach, in addition to trades, the following subjects: Religion, Russian language, arithmetic, history, geography, natural history, singing, and gymnastics; these to be taught in a form and manner conformably to the object of the school." "The teaching of drawing in women's industrial schools ought to be obligatory, and the pupils must present themselves for examination on this subject." "Instruction in handiwork is not only useful but necessary in general educational establishments." "In the women's workshops cutting should be taught from the beginning of the course, and to girls from 12 years of age upwards, while the pupils should be familiarized with different systems of cutting."

An interesting report was then read by Mr. Stranolylnsky concerning women's professional schools for those who had acquired an education of the gymnasial type. He considered the pedagogical profession to be especially suited to women, and advocated the establishment of special pedagogical institutes with gymnasias attached. He also urged the creation of medical courses for women on the model of those which, in time past, had been the pride of the country. There was, he said, great need in Russia for the services of women doctors and trained assistants to medical men, such as nurses and midwives. At present, for women who wished to qualify themselves for the artistic and dramatic profession, ample opportunity was afforded by the Conservatory of Music, the Academy of Art, and by various musical and art schools and courses. The speaker stated that in view of the modern widening of the sphere of women's professional work, it had become necessary to organize commercial education for women. In his opinion women's commercial schools ought to be established independently of the institutions for general education. In the commercial courses he would include tuition in postal and telegraph work, and his plan also embraced pharmaceutical courses for women. The section unanimously indorsed the proposals of Mr. Stranolylnsky.

In the fifth section, the sittings of which were presided over by Mr. K. K. St. Hilaire, the questions discussed included the pedagogical and utilitarian significance of manual training in the general educational establishments; the obligatory introduction of manual training into such establishments; manual training in the middle

grade schools; the study of those trades in which the material for manual training in the schools may be found; the preparation of teachers of manual work. The section resolved that manual training ought not to be mixed up with the teaching of trades, but should be regarded as a general educational subject of great importance for physical education, and as one salutary in its influence upon the intellectual and moral advance of the pupils.

As is shown in these discussions, the subject of manual training is quite a recent one in Russia, but such training is liable to be successfully carried out, for the minister of public instruction and the Russian people realize the benefits to accrue from its becoming a part of the school programme. It is observed that the majority of the speakers agree that it should be introduced in a general course of instruction, but that the development, both physical and intellectual, should be in accordance with the needs of the locality, and in a measure preparatory to any trade which might afterwards be taken up. Stress was also laid upon the consideration of manual training as constituting the gymnastic of the will, experience having demonstrated that it develops both energy and independence. In regard to its introduction in secondary schools the congress indicated its manifest approval of manual training as a supplementary branch to the usual course, for by this means the higher classes of society, who are to be found in greater numbers in this grade of school, would learn to respect work; and thus a sentiment for the beautiful in the domain of form would be cultivated.

It was decided by the congress to request the establishment of a commission to investigate the points more especially brought out during the discussions. Later information indicates that the commission has already commenced its work, and that it will report to the second congress for the study of technical and industrial instruction which is to be held in Moscow in 1893.

AUTHORITIES CONSULTED.

Опытъ систематическаго обзорѣнія матеріаловъ къ изученію современнаго состоянія средняго и низшаго техническаго и ремесленнаго образованія въ Россіи Н. А. Анопова.

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CHAPTER IX.

THE EDUCATIONAL SYSTEM OF JAPAN.¹

Constitutional Empire (since February 11, 1889); area, 147,655 square miles; population² 40,072,020 (January 1, 1890); capital, Tokio; population, 1,389,684; minister of state for education, Count Oki Takato.

ADMINISTRATION AND HISTORY.

The archipelago of Japan comprises 3,850 islands, four of which, Hondo, Kiushiu, Shikoku, and Yezo, rank as the most important. Its territorial organization is divided into 85 provinces, 42 urban and 804 rural districts, 1,111 towns, and 13,374 villages (1890).

The administration of the provinces is regulated from the three Fus, or imperial cities, Tokio, Kioto, and Osaka, and from the forty-three Kens, or prefectural divisions of the Empire. For still further local administration there are Ku and Gun, or subdivisions into cities or wards, and counties, and, since April 1, 1889, an imperial decree has established minor offices which deal almost entirely with the administration of municipality, town and village. This further carries out the principle of decentralization and self-government and is to be applied gradually according to the circumstances and requirements of the localities.

The Hokkaidô, or Northern Province, has a special organization of its own, a governor and an administrative board. According to the constitution of February 11, 1889, the Emperor controls all the administrative affairs of the Empire, exercising executive power with the assistance of his ministers and privy council, and legislative power with the consent of the two legislative bodies, or Imperial Diet, which controls the finances and the administration of justice. Provincial affairs are controlled by the governors, one for each Fu or Ken, but they in turn receive directions from the cabinet. The minor officers in the

¹ Prepared by Miss Frances Graham French.

² In 1889 the population was divided among the various classes as follows: Imperial family, 46; Kwazoku or nobles, 3,825; Shizoku or knights (formerly retainers of the Daimios) 38,074,558; common people, 1,993,637. The number of foreigners in 1890 was 9,063; of these 4,975 Chinese, 1,701 English, 899 Americans, 550 Germans, 312 French. The number of Japanese residents abroad in 1889 was 18,688.

various territorial subdivisions referred to above are under the superintendence of the governors, and in the wards and villages the reports as to administrative affairs are made to an intermediary who himself refers affairs to the governor.

The history of the Empire from the founding of the dynasty of Jimmu (660 B. C.) through years of a feudal system may be divided into four periods—the first, a purely local one, ending with the landing of the Portuguese in 1543; the second, from 1543 to 1638 including the introduction of Catholicism into Japan and the final ordering away of all foreigners from the country, as their presence came to be considered detrimental to the political system and to the religions of Japan (*i. e.*, Shintoism and Buddhism); the third, from 1638 to 1854, continuing the exclusion of foreigners and being distinguished by the Dutch monopoly; the fourth, since 1854, includes the establishing of commercial treaties with foreign powers, the sending of enlightened statesmen to European and other countries to study advanced civilization in the most progressive nations, and as a result of such study follows the consequent development of a more liberal form of government. Ethnologists differ as to the origin of the people of these islands, but it is stated that the modern Japanese race is a commingling of a people which came from Southern Asia and the Malay Archipelago with the Corean and Chinese peoples.

The religions are that of Shintoism or worship of the sun goddess (the spiritual emperor being considered the direct descendant, and every district having its patron saint or kami), and the Buddhistic, which, introduced in the sixth century, is considered a more modern creed. The literati believe in the system of morals and the philosophy of Confucius. The literature of Japan includes original writings and translations and the whole circle of Chinese Confucian literature. The Chinese classics, indeed, form the basis of the literature, system of ethics, and highest type of thought of the Japanese people. In tracing the history of the nation, one clearly sees a marked development along educational lines. As early as 285 A. D. a Corean came to Japan and taught the heir apparent Chinese letters and the ethics of Confucius. In 552 Corean missionaries introduced books, the writings of the Chinese classics, and Buddhistic images and canon. This was a noticeable period from the educational standpoint. Officials and the nobility learned to read and write, and literary, governmental, and historical records were soon compiled. The religious development, combined with its attendant schoolmasters, was the means of creating a limited class of readers, and from the sixth century on education and Buddhism seemed to move on together. Kobo, a priest and schoolmaster, who lived from 774 to 835, was learned in the Pali, Sanscrit, and Chinese languages, and was credited with being the inventor of the Japanese alphabet. To him is due the national success of Buddhism, as he developed a system of theology in which Buddhism absorbed Shintoism. Following him came Sugawara

Michizané (died 903 A. D.), who also aided in the advancement of literature and education. From that date to the twelfth century the Emperor (or, as he is usually called, the Mikado¹ or Golden Gate,) ruled supreme from Mara to Kioto, which were well known political and educational centers. With the year 1192 commenced the period of the Shôguns (tycoons), which was that of a dual government with two rulers, two capitals, and two centers of authority. This duarchy lasted until 1868, when the Shôgunate was overthrown. The principle of duality was also carried out in the Japanese language, for there were two distinct alphabets, the Chinese ideographic symbols and the phonetic alphabet.

The former is especially in use in the higher class of books and in diplomatic documents; the latter has been subject to great variation, but from it has developed a simpler alphabet known as the Katagana characters. Evidence of intellectual activity was apparent as early as 1333, for, dating from that period, are chronicled the establishment of monastic schools and the general spread of Buddhistic doctrines; then followed a period favorable to the Jesuits but less so to the Buddhists. During the years 1532-1582 a reaction was apparent, and where formerly the nobles only were educated there developed a centralization of the feudal system at Yedo, and an extending of educational facilities to all classes throughout the Empire. The basis of the culture manifest from 1604 to 1868 was found in the study of the Chinese classics of Confucius and Mencius. Native literature was largely studied, and the fundamentals of education, reading, writing, and the abacus were generally taught. At date of 1854 it was reported that seven-tenths of the people could read and write, and there were military, gymnastic, and normal schools, universities, and private schools in various sections of Japan. Both sexes were accorded equal educational privileges, and the people were gradually realizing the necessity of more direct communication with the outside world, and the introduction of a national system of education developed from the highest types found amongst other nations. The local government of the past was slowly yielding to broader modern influences and the more enlightened statesmen looked forward to the establishing of a more direct central power. The commercial treaties of 1854 and 1858 opened Japan to the outside world and more reliance could be placed on the information obtained in regard to the Japanese people. The statement in regard to earlier periods of history were often not to be relied upon, as many details had been left to mere hear

¹The Mikado's right and authority are grounded on the belief in his divine descent. Honors conferred upon him were always considered the highest distinctions which could fall to the lot of any subject, not exceeding the all-powerful Shôgun. The distinctions of class are especially noteworthy in Japan. These distinctions were a gradual outgrowth of feudalism. The groups are as follows: The Mikado house, with the court nobility (Kuge) in Kiôto, the military class, or Samurai, and the laboring class or the people (Heimin.)

say evidence, or to the imagination of the writers, but from 1854 on Japan entered upon a new period of existence. In 1863 the Tycoon, Stotsbachi, begged the Emperor to convoke all the nobles of the Empire, so as to take into consideration the placing of the Government upon a firm basis. The efforts to carry out this plan brought about a revolution which was unexpectedly favorable to the Japanese. In 1868 the Emperor endeavored to thoroughly transform the Government by taking steps to abolish the feudal form of government, which he was successful in doing in 1871. The tycoons were overthrown and the Emperor became the supreme ruler.

In 1869 a decree regulated the administrative department, and the foundation of the present system of internal affairs was laid. In 1871 the Emperor established himself in Yedo, which he called Tokio, instead of remaining in Kioto, the old capital of the Mikados. He then sent ambassadors to the United States, England, and France to study the civilization of those countries and to enter into commercial treaties with them. He also called distinguished men from America and Europe to reform all branches appertaining to the general administration of the Empire. He increased the number of schools and sent young persons to the colleges of America, England, and France to study at governmental expense. In 1871 a ministry of education was established; in 1872 the scheme of the present system of education was presented; in 1873 the Japanese adopted the Gregorian calendar, and all present publications bear both the date of the Gregorian calendar and that of Meiji or the present dynasty. From the administrative standpoint Japan was formerly divided into ten¹ territorial circuits formed of sixty-eight provinces, over each of which was a governor. These officials formed a feudal confederation, but the revolutionary movements indicated above brought about tendencies towards centralization and gradually new legislation was adopted, which, based upon French models, reorganized the legislative branch of the Government and brought about the adoption of new laws in 1876. The legislative reforms were completed by the creation of a school of law, with a French gentleman as director. Another school, where French only was taught, was created in connection with the ministry of justice, the pupils receiving instruction in all studies in that language.

Before the Restoration,² as the first year of the Meiji was called, institutions for the elementary education of children were chiefly those of the Hangaku, Kyōgaku (private schools of low standard), and Terakoya.

¹In 1885 the whole country was divided into six (reduced to five afterwards) educational circuits, for each of which a special school inspector was appointed. This in a measure simplified the general plan of supervision, but it brought about more efficient supervision from the central organization.

²The change from the rule of the Shogunate to that of former times, when Japan was under one ruler, the Mikado or Emperor, is usually referred to as that of the Restoration.

The Hangaku were institutions established and supported by the various provinces, where children of the military and higher classes were taught but which were sometimes opened to children of dependents; the Kyōgaku were institutions, established within the territories of Taifu (chief ministers of feudal lords), or in other prosperous districts, where chiefly children of the military class were taught, but to some of them pupils of all classes were admitted. These institutions were supported at public expense. After the Restoration elementary schools were first established in the Fu of Kioto, but these schools were only a slight improvement on the Terakoya, a real development being manifested, however, in 1871, when six elementary schools of Tokio were placed under the direct superintendence of the department of education, which was established at that date, and a regular course of instruction was arranged.

In the first year of Meiji, 1868, the political power having been transferred to the Emperor, the Gakushū-in (a school for nobles) was established in Kioto. This was the first step toward the improvement of education after the political reform. In 1869 there was established in Tokio the university, which had control of educational matters over the whole country. In 1871 the controlling powers of the university were replaced by the department of education, or Mombushō, which has entire charge of the educational system of the country. In the year 1872 a new law of education was presented by which the school districts and the mode of instruction in the university, secondary schools, and elementary schools, were determined. The school age of children was also fixed at from 6 to 13 years. At this period a great many schools were established in various parts of the country, and great improvements were made in the general methods of instruction. In January of 1875 the school age of children was altered to 6 to 14 years. In September, 1879, the old law of education was abolished, a new law of education was passed, and many improvements were made in the system. Thus it is seen that elementary education is based upon the law of 1872. It was placed on a firm basis by the revision of 1880 which modified the system of school districts, lengthened the course of study to more than thirty-two weeks a year, and gave to the authorities of Fu and Ken greater power over education.

Still further improvements came from imperial ordinances, in 1886, relating to elementary schools, and there were still later efforts at reform. The secondary schools for pupils completing the elementary course date from 1872. Their course varied from two to six years, and the subjects differed in the various localities. Modifications of this basis were made from time to time, and in 1886 the secondary schools, which were subdivided into lower secondary and higher secondary schools, and had had no connection up to that time with the university, were distinctly designated as institutions to prepare pupils for practical occu-

pations, or for admission to higher educational institutions. In the year 1872 teachers institutes were established, and that year also gave birth to the normal school, which was first established on a firm basis in 1873, and was divided in 1879 into preparatory, higher preparatory, and professional courses. In the year 1883 there was an entire remodeling of these schools; in 1885 it was decided to train the two sexes together, and in 1886 the normals were divided into higher and lower normals; the higher normal to be established at Tokio under direct control of the minister of education, and each Fu and Ken to have a lower grade normal school. The university, the many special schools, and those of miscellaneous character, have all had their changes in the years under advisement. The various laws and imperial ordinances have not left these institutions untouched, but the changes have possibly not had so marked an effect upon the people at large as in the elementary and secondary schools, hence a study of these institutions can be deferred to the appropriate headings below, even so with the modifications in supervision, in attendance, and general conduct of schools. It suffices here to state that from this cursory glance over the administrative and educational history of the Japanese peoples a general deduction may be made. Thus from 1867 to 1889 the capacity of the people for self-government was tested, and it was manifest, as early as 1878, that this system of government had steadily advanced. In 1881 there was the promise of a liberal constitution, and in 1889 came the fulfillment of that promise. In 1881 power was granted to establish local educational boards, and in 1885 greater freedom in the shaping of local educational methods was noticeable. The period commencing with 1889 gave new laws for city, town, and village government, changed the local subdivisions, brought about new electoral privileges, and in every direction indicated the effect of broader modern influences. Special phases were developed, however, in different sections, and widely different conditions were noticed, but with the firm establishment of a limited and liberal constitutional monarchy, based upon the new constitution of February 11, 1889, one of the most ancient peoples finds itself abreast with modern movements adopting a system of liberal ideas as advanced as those of any European nation, and based in part upon French and American models.

SCHOOL SYSTEM.

Establishment.—According to the law of 1879, with its modifications of 1880, 1886, 1889, and 1890, the schools are divided into the kindergarten, elementary, secondary, normal, and professional schools, universities, agricultural, commercial, and industrial schools, and other institutions of learning. These schools are established by governmental authority, and under the general control of the minister of education,

aided by the governing powers of Fu and Ken,¹ or under the control of other ministries, an account of which will be presented as occasion offers.

The kindergärten include governmental, public, and private establishments. They were first established in 1876, with the object of training children from 3 to 6 years of age in such branches as "foster moral virtues, promote physical development, train in good habits, and unfold the intellectual faculties."

The elementary schools are those in which general education is given to children and at which attendance is compulsory, the school age being fixed at from 6 to 14 years and the sexes being generally taught together. By ordinance of 1890 the schools are divided into lower elementary, and higher elementary schools. Those established and maintained at the expense of cities, towns, or villages, or of town and village school unions, or of the districts within them, are called city, town, or village, elementary schools, and those established and maintained at the expense of private individuals are called private elementary schools. Apprentice schools and supplementary schools for technical instruction are also classed under the heading of elementary schools. Each city, town, or village is expected to establish and maintain elementary schools sufficient to accommodate all children of school age, 6 to 14, resident in such city, town, or village. The city, town, or village may also establish and maintain kindergärten, libraries, schools for the blind and dumb, and miscellaneous schools similar in character to elementary schools.

The secondary schools, which give higher instruction in the branches of study preparing for liberal pursuits or more advanced education, are organized according to the local conditions of each Fu and Ken and in conformity with the general regulations issued by the department of education. Normal schools intended to train teachers for elementary schools are to be established in every Fu and Ken. The object of the university is to give instruction in special branches in its four departments of law, science, medicine, and literature. The professional schools, which are organized according to the local condition of Fu and Ken, include medical, pharmacal, legal, scientific, mathematical, architectural, naval, foreign language schools, gymnastic and drawing schools. The regulations of these schools are determined by the department of education or by the departments to which they are assigned, such as that of military affairs, agriculture, marine, etc., or in part by local conditions. The agricultural schools have courses, which are determined according to local conditions, and are conse-

¹ The Japanese terms used throughout this article may be defined as follows: Fu, Imperial city (each Fu consists of one main city with suburban districts); Ken, or prefectural divisions of the Empire. The Fus are divided into Ku, cities or wards, and Cho, precincts. Then there are the Gun, or counties, which since 1889 are divided into Shi, Cho, and Son (graded according to population). The Shi is a city, generally; Cho, a town; and Son, a village. The Fu Chiji and Ken Rei are governors, respectively, of city and county. The Kôchô is a director, and the word Chô is also used to indicate a magistrate.

quently not uniform; agricultural institutes teach practical business, and have a simple course of study. Commercial schools, which, like the above-mentioned schools, are organized according to local conditions, but in accordance with general regulations issued by the minister of education, give their students the opportunity to learn the practical business of commerce. Industrial schools are to be established according to similar conditions, so that students may learn practical business. Private schools are also established with the approval of the governor of Fu and Ken, and all public and private schools are to be opened to inspection of any officials designated by the minister of education. High schools for girls are for the purpose of giving a higher class of education to girls who have completed the elementary school course. Then there are various miscellaneous schools, organized in different localities, such as Japanese, Chinese, French, German, and English schools, those for the deaf and dumb, bookkeeping schools, handiwork schools for women, schools where arithmetic alone is taught, and those in which reading is the main basis of instruction.

State control.—The majority of the schools, unless some of the private ones be excepted, are under the general control of the minister of education, who presides over the department of education. He is aided in supervising education throughout the country by special inspectors, who exercise general supervision over the local authorities by visiting the schools when sent out by the department. There are also many schools under the control of the department of the imperial household, under the military department, under the control of the department of marine, of justice, of agriculture and commerce, the department of communications, and under the control of the Hokkaidô¹ administration board.

Local control is not regulated by any fixed rules, and there have been from year to year many modifications of the ordinances governing such general oversight. Sometimes there are committees of inspection; the school officials of Gun and Ku attend to the periodical examinations; supervising teachers aid in the matter of improving educational systems; teachers of morals are also sent from point to point within their own jurisdiction. More than this, all the local authorities aid in the matter of control over the schools in their respective districts, so that through the reports made to the special inspectors, and by them to the department of education, there is positive knowledge among the officials at Tokio of the condition of educational institutions throughout the Empire.

Maintenance.—The law of 1879 classifies the schools in point of maintenance into public and private; the former being maintained by local taxation, or at the public expense of the cities, towns, or villages in which they are established; the latter being those which are estab-

¹ The Hokkaidô is the name given to the northern country or islands of Japan, and, being so remote from the central authorities, has its own administration board in charge.

lished and supported at the private expense of one or more individuals. In localities where school funds are deficient itinerant schools may be established and school fees may be charged, or not, according to the needs of the locality. This local taxation does not do away, however, with appropriations from the Government, which are regularly made to the respective educational circuits. The grounds occupied by schools are generally exempted from taxation. In 1886 the maintenance of elementary schools was changed somewhat. Where formerly the expenses were defrayed out of the rates of ward and village, they were to be supplied by school fees, and if money was obtained by contributions, it was to be available for the payment of expenses. When school fees and donations were not sufficient to defray the expenses, the deficiency was to be supplied out of town or village rates. If local circumstances made it necessary a simpler elementary course might be substituted for the ordinary elementary course and the town or village pay the expenses, even to the salaries of teachers, out of the village taxes. The national treasury was to support one higher normal school; each *Fu* or *Ken* to support a lower grade normal from the local taxes and a lower grade secondary school. A higher secondary school was to be established in each of the five districts into which Japan was divided; its expenses to be paid partly by the national treasury and partly by local taxes of the *Fu* or *Ken* of the circuit. In the *Hokkaido* and *Okinawa Ken* the expenses of normal and secondary schools were to be defrayed out of local supplies paid from the national exchequer, and the elementary schools established by towns and villages were to be aided partly by local taxes. By imperial ordinance of 1886 it was prescribed that regulations for the management of school funds should be established by the Governors, namely, the *Fu Chiji* or *Ken Rei*. By this provision not only the school funds, but also the sites, school lands, buildings, books, and apparatus were not to be diverted to other uses. According to imperial decree of 1890 cities, towns, or villages, or town and village school unions are to maintain elementary schools as follows:

To provide and maintain school buildings, school sites, school appliances, gymnastic halls, and lands for practical training in agriculture; to provide for the salaries, traveling expenses, etc., of elementary school teachers; and to provide for such miscellaneous expenses as are incurred in connection with elementary schools.

The maintenance of higher schools does not seem to be changed from the earlier conditions mentioned above.

STATISTICS.

Before proceeding to give statistics it may be well to state that during the years 1886-'90 many decrees, which bore directly upon education, were promulgated by the highest authorities; the *Fu* and *Ken* authorities rearranged their school districts, the school arrangements being so different in the various cities and counties that no comprehensive statement can be given; great alterations in boundaries of towns and villages were made, and there was general readjustment of school

properties. New laws for the organization of towns and villages were carried out as far as practical, and a corresponding increase in school districts was apparent. Seventeen Fūs and Kens, in 1889, were awaiting the issuance of a revised ordinance for elementary schools before rearranging their school districts, and two Fūs and twenty-six Kens had already commenced such reorganization so as to receive the benefit of the greater educational advantages which would naturally accrue from such change. To date of 1889 the most material advantages were felt from the influence indirectly exercised on education in towns and villages by the operations of new laws for the organization of cities, towns, and villages. The rearrangement of school districts involved the establishment of new schools, the suspension of others, and the rearrangement of school property. The general outcome of such efforts tended more directly toward an increase in the number of schools, teachers, and pupils, and in the amount of income and expenditure. The local authorities, aiding in the general tendency toward progress, had in view measures leading to an improvement in the standard of teachers, to a greater accumulation of school funds, and to a wider diffusion of education for women. The principal events of these years, naturally leading to the statistical presentation which follows, may be summed up by stating that the educational laws in force were found to be contradictory in spirit to the laws which were passed in regard to the organization of cities, towns, and villages. In order to keep abreast with the reorganization mentioned above a general school revision must necessarily follow; then came the promulgation of general regulations relating to local education; imperial ordinances relating to elementary schools, laws relating to salaries of directors of Fū and Ken normal schools; relating to pensions to retired officials, or to their families in case of decease; relating to retired teachers and the families of deceased teachers in city, town, or village elementary schools. As a climax to these movements the Emperor addressed his people, and in his speech, while considering the subject of education, he especially called attention to the necessity of a firm establishment of a standard of moral education, and of a course of conduct to be followed by children. The main points of these various ordinances and laws will be presented under the various heads into which this paper is divided.

In 1890 the population of Japan was 20,932,367 males, 20,389,638 females; total, 41,322,005. The school districts numbered 12,383. The school population numbered 7,195,412 (males, 3,765,984; females, 3,429,428). The number of pupils receiving instruction, expressed in its percentage to school population, was 48.95. The number of pupils to total population, expressed in percentage, was 7.79. Of the whole number in school 3,520,718 were receiving the prescribed course of instruction, and 3,674,694 were not receiving the regulation course. The institutions under the control of the department of education include 1 university, 7 higher secondary schools, 2 higher normal schools, 4 special schools, 1 school for the blind and dumb, and several schools and

kindergärten attached to the higher normals. The pupils in the above-mentioned schools were 7,160; graduates, 926. This does not include pupils in the elementary courses attached to the higher normals. The expenditure by the department for school purposes was 1,100,689 yen.¹ Special expenditure, 265,312 yen. Under the control of the local authorities were 26,012 elementary schools, 47 lower grade normal schools, 54 lower grade secondary schools, 30 higher schools for girls, 55 special schools, and 1,650 miscellaneous schools, the total being 27,846. Of this number 25,425 were public and 2,421 private establishments. The number of instructors and teachers was 74,024, that of pupils, 3,211,931. • In the public schools 311,505 pupils had completed their courses of study, and 17,823 in the private schools. The amount of expenditure for the public schools was 8,675,140 yen. It may here be stated that although the imperial ordinance relating to elementary schools had been promulgated in the year 1889-'90 it had not yet been carried into effect on account of the various accessory ordinances which must necessarily be issued. The efforts of the authorities during the year were directed toward completing such measures as had been undertaken in the previous year. The following table more clearly presents the classification of schools than can be done by any other method. The majority of the elementary and higher schools are supported by Government and by local rates.

Tables showing the number of Government, public, and private schools for the twenty-third year of Meiji, 1890.

Classification.	Number of schools.				Number of instructors and teachers.			
	Government.	Public.	Private.	Total.	Government.	Public.	Private.	Total.
Elementary schools.....	5	25,277	735	26,017	31	66,463	1,236	67,730
Lower grade normal schools.....		47		47		624		624
Higher normal schools.....	2			2	30			30
Lower grade secondary schools.....	1	43	11	55	8	572	100	680
Higher schools for females.....	1	7	23	31	14	83	214	311
Higher secondary schools.....	7			7	335			335
Imperial University.....	1			1	227			227
Special schools.....	4	23	30	57	115	210	426	751
Miscellaneous schools.....	1	28	1,622	1,651	11	126	3,970	4,107
Grand total.....	22	25,425	2,421	27,868	711	68,078	5,946	74,795

Classification.	Number of students and pupils.				Number of graduates.			
	Government.	Public.	Private.	Total.	Government.	Public.	Private.	Total.
Elementary schools.....	570	3,038,032	57,798	3,096,400	58	309,475	5,521	315,054
Lower grade normal schools.....		5,295		5,295		942		942
Higher normal schools.....	162			162	40			40
Lower grade secondary schools.....	66	9,916	1,658	11,620		493	36	529
Higher schools for females.....	132	1,426	1,562	3,120	15	116	190	321
Higher secondary schools.....	4,356			4,356	373			373
Imperial University.....	1,312			1,312	402			402
Special schools.....	1,061	2,804	8,925	12,790	96	367	2,103	2,566
Miscellaneous schools.....	71	1,579	82,956	84,606		112	9,973	10,085
Grand total.....	7,730	3,050,052	152,879	3,211,661	984	311,505	17,825	330,312

¹ The gold yen is worth 99.7 cents; consequently the amount in dollars is nearly the same. The last three figures usually represent the sen and the rin, which are, respectively, the one-hundredth and one-thousandth part of a yen.

As will be observed, the number of elementary schools was 26,017. The number of school buildings for elementary schools newly constructed during the year was 731; the expenditures for the same being about 413,965 yen. The average number of new buildings for each Fu or Ken was 16; the amount of expense for each school, 566 yen. The number of teachers (including pupil teachers) in elementary schools was 31 in the Government schools, 66,463 in the public schools, and 1,236 in private schools. That is a total of 67,730. The average number of pupils for each teacher was 46.7, both in public and private schools; the average number of teachers for each school is 2.63 in public schools, 1.68 in private schools. These averages are apt to be misleading, however, as in the Ken of Loyama there were 74 pupils under the care of a teacher, and in the Ken of Nagano there were only 26. The average paid to teachers of these grades ranged between 144 and 75 yen in some of the Kens, and between 420 and 30 in other Kens, while the highest annual salary was 600 yen. The total number of pupils was 3,096,400, of whom 570 attended the Government schools, 3,038,032 the public schools, and 57,798 the private schools. The number of those who have completed the elementary course was 315,054, of whom 17,956 belonged to the higher elementary, 229,447 to the second division of the elementary schools, and 67,651 to the simpler elementary course. The average number of pupils in daily attendance, expressed in per cent, was 72.37 in the public schools and 84.54 in the private schools.

In Japan importance is attached to infant training, and an annual increase in the number of kindergärten is reported. In 1890 there were 138 of these schools, 99 of them Governmental and 39 private ones. The number of conductors was 271, of children in attendance, 7,486 (4,185 boys, 3,301 girls). As regards the prosperity of the kindergärten, those in the Fu of Tokio, Kioto, and Osaka take a first rank. A dearth of conductors there and elsewhere was reported, and this necessitated the opening, in connection with the normal school in Tokyo, of an institute for the training of teachers for infant schools, from which institute eight conductors were graduated in 1890. A private educational society of Tokio also established an institute of kindergarten conductors and sent out twenty persons to fill the kindergarten ranks.

The normal schools were affected by a revision in their regulations in 1886. Since that date great attention has been paid to the opening of new schools, to the furnishing of apparatus and appliances, and to the mode of teaching the subjects of study newly introduced. The number of lower grade normal schools in 1890 was 47, with 579 male and 45 female teachers; 4,410 male, and 885 female pupils; the graduates numbered 810 males, and 132 females. The annual expenditure during the year 1890 amounted to 800,307.186 yen; the greatest average amount for each pupil was 298 yen; the smallest average amount 82 yen, while the general average was 151.44 yen. The two higher normal schools

under the control of the Département, *i. e.*, the Tokio Higher Normal School and the Tokio Female Normal School had their pupils distributed as follows: Nineteen Japanese instructors, 1 foreigner, 23 pupils each in the physical, chemical, and literary course, and 30 in the biological course; 15 graduates in the biological course, and 4 in the elective course, these graduates being now engaged in lower grade normal and secondary schools. In the elementary school attached to the higher normal were 423 pupils. The Tokio Educational Museum attached to the school contained 14,661 objects, and had been visited by 9,770 persons during the year. The amount of expenditure was 51,160.293 yen for the Higher Normal. In the Higher Female Normal School there were 10 Japanese instructors and 86 pupils. Thirteen pupils graduated in the female normal course and eight in the elementary normal course. The teachers in the attached elementary school numbered 71 Japanese, with 213 pupils. In the kindergarten there were 7 conductors and 183 children. The expenditure amounted to 30,608.67 yen.

The lower grade secondary schools, 55 in number, had 650 Japanese and 3 foreign instructors; pupils, 11,620; graduates for the year, 529. The expenditure of the secondary schools established by Fu and Ken was 297,458.597 yen, an average rate for each school of 6,917 yen; for each pupil 29.998 yen. About 25 per cent of the pupils leave school before graduation, especially from the classes of the fourth and fifth years. The private secondary schools numbered 11; instructors 98; pupils 1,638; graduates 36; expenditure 28,170.701 yen; amount for each pupil 17.198. The 7 higher secondary schools had 320 Japanese and 15 foreign instructors, with 3,037 pupils in the main schools and 1,319 in the medical departments. Graduates during the year numbered 200 pupils in the main schools and 173 in the medical departments. Classified according to social orders there were 7 Kwazoku (peers); 1,784 Shizoku (military class), and 1,246 Heimin (the common people) in the medical departments. The expenditure during the year was 433,757.834 yen.

Lack of solid foundation is reported from some of the higher female schools, but this comes in part from the long years of neglect of female education, and in part from the fact that many of them are simply adjuncts of the lower grade secondary schools, so that no separate reports from these can be made. The higher female schools under control of Fu and Ken numbered 7 public and 22 private establishments, 132 male and 148 female Japanese instructors, and 17 foreign female teachers; pupils 2,983; graduates 317. The Imperial University is under the control of the Minister of State for Education, and depends for its revenue upon annual allowances from the treasury of the Imperial Government. Its tuition fees and other sources of income are allowed to accumulate year by year so as to have a large fund, a portion of which may, however, be paid out from time to time. The statistics of the university and its different departments may be best presented in the following table for 1890. The special changes in course of study and the general progress will be indicated on pages 298-299.

Statistics of the Imperial University.

	Number of professors.			Students.	Pupils.	Total.	Graduates.			Amount of expenditures.
	Japanese.	Foreign.	Total.				Students.	Pupils.	Total.	
University Hall.....				47		47	1		1	Yen. 1,690,302
Law College.....	14	5	19	286	15	301	83		83	30,421.153
Medical College.....	73	2	75	123	65	188	45	121	166	146,804.774
Engineering College.....	31	4	35	85	21	103	28	3	31	61,038.142
College of Literature.....	14	5	19	35	53	88	5	14	19	34,954.658
College of Science.....	29	2	31	25	72	97	10		10	62,054.521
College of Agriculture.....	41	7	48	81	404	485	25	83	108	41,284.724
Total.....	202	25	227	682	630	1,312	197	221	418	378,251.274

The College of Agriculture was first established in June, 1890, it being in reality a transfer of the Tokio Dendrological School to the university, and its course was made to extend over three years. Attached to the university are the library, botanic garden, astronomical observatory, and hospitals of the medical college.

The number of Government special schools is clearly indicated in the following table. They are under the control of the Department of Education:

Schools.	Number of instructors.			Pupils.	Graduates.	Amount of expenditures.
	Japanese.	Foreign.	Total.			
Higher Commercial School	46	4	50	630	55	Yen. 40,706.596
Tokio Technical School.....	32	1	33	212	41	56,804.331
Tokio Fine Art School	23		23	148		25,303.678
Tokyo Academy of Music.....	8	1	9	71		14,811.338
Total	109	6	115	1,061	96	137,625.943

During the year 1890 the apprentices' school for merchants and artisans was transferred from the higher commercial school to the Tokio Technical School. The latter, formerly designed to train technologists, foremen and superintendents of factories, was changed to that of a school for preparing foremen and teachers of industries. The total number of public special schools was 53; instructors, 636; pupils, 11,729; graduates, 2,470. Among the pupils 5,521 were studying law; next in point of numbers were the pupils studying medicine, 1,521; commerce, 1,338, and mathematics, 1,257. The school of engineering had 593 pupils; agriculture, 427; literature, 390; philosophy, 288; surveying, 128; drawing, 94; veterinary surgery, 74; political economy, 54; navigation, 3. The number of pupils studying agricultural and commercial branches is steadily increasing, but as compared with the law schools those institutions are not prosperous as yet.

The miscellaneous schools maintained by public funds are not especially numerous, but they include a variety of subjects, and the private establishments not only make out in point of numbers what the public schools lack, but also show the tendency of training towards various professions. Hence a table is here appended:

Table of miscellaneous schools, with subjects of study in 1890.

Subjects of study.	Government Hokkaido Fu and Ken establishments.						City, town, or village establishments.						Private establishments.								
	Number of schools.			Number of pupils.			Number of instructors.			Number of pupils.			Number of schools.			Number of instructors.			Number of pupils.		
	Male.	Fe- male.	Total.	Male.	Fe- male.	Total.	Male.	Fe- male.	Total.	Male.	Fe- male.	Total.	Male.	Fe- male.	Total.	Male.	Fe- male.	Total.	Male.	Fe- male.	Total.
Japanese and Chinese.....																					
English.....				14	28	31	59	285	412	697	1,326	127	1,453	24,093	5,677	29,770					
French.....				1	3	3	3	23	23	23	92	121	1,023	18,133	2,435	20,528					
German.....											7	4	23	240	36	282					
Russian.....											10	53	53	1,213	3	1,218					
Law.....											11	11	11	97		97					
Medicine.....											12	69	69	863		863					
Pharmacy.....	1	3	11								10	95	96	908	10	918					
Navigation.....											5	25	25	244	3	247					
Commerce.....				5	17	17	379			379	44	1	44	862	23	885					
Mathematics.....											128	186	3	189	6,666	276	6,942				
Bookkeeping.....											87	116	2	118	4,782	40	4,822				
Writing.....											83	73	17	90	1,889	1,285	3,174				
Drawing.....											12	15	15	15	189	24	213				
Veterinary surgery.....				1	1	1	1	8		8	8		8	64		64					
Preparatory course for middle schools.....											8	51		51	918		918				
General branches for blind and deaf and dumb.....											2	2	9	64	3	36	6	42			
Handwork.....	1	10	1	11	43	28	71			87	28	170	198	31	4,282	4,313					
Midwifery.....				1		3				125	2	2	33		275	275					
Chinese, English, and arithmetic.....				1	4	2	6			33	31	26	20	46							
Singing.....				2	8		8	121		121	100	346	35	381	5,553	344	5,897				
Gymnastics.....											5	10	4	14	89	97	186				
Science of education.....											3	11		11	570		570				
Political economy.....											1	6		6	51	12	63				
Shorthand.....											2	8		8	80	6	86				
Nursing.....											2	3		3	159		165				
Physics.....											2	2	4		28	29	31				
Infant training.....											1	3	9		105	20	124				
Surveying.....											2			3	25	25	25				
Industry.....	1	17			80	15	95				1	8		8	25	25	25				
Agriculture.....											3	3		3	13	3	16				
Total.....	3	30	1	31	134	43	177	26	533	1,473	3,461	519	3,970	67,982	14,974	82,956					

The school age is defined according to imperial ordinance as "the period of eight years between the sixth and fourteenth years of the child's age." The guardians or parents are under obligations "to cause such children to attend school until they have completed the lower elementary school course," this obligation "to take effect from the beginning of the school year subsequent to the child's obtaining school age." Guardians are to send "children of school age to the city, town, or village elementary schools, or to the private elementary schools to be substituted for them, but in case they desire to give the lower elementary school course to their children of school age at their own homes or at any other places, the approval of the highest official of city, town, or village must first be obtained."

The length of the school year is not specifically stated, but it is decreed that the number of holidays shall not exceed ninety, exclusive of Sundays. This rule does not apply, however, to apprentices' schools, supplementary schools for technical instruction, and supplementary courses.

In the university the academic year begins on the 11th of September and ends on the 10th of July, and the year is divided into three terms. The first is from September 11 to December 24 (105 days); the second from January 8 to March 31 (83 days); the third from April 8 to July 10 (94 days).

FINANCE.

Income.—The funds of the schools established by the different departments are supplied from the national treasury, and consequently out of the appropriation intended for the use of the respective departments. The funds of schools established by Fu and Ken are supplied from the local taxes paid by the people of the respective Fu and Ken. In some cases the money contributed and the tuition fees are added to the local tax to make up the fund, or sometimes a part of it is supplied by governmental subsidies. Tuition fees are considered part of the resources of cities, towns, and villages. The funds of schools, etc., established by wards or villages are supplied from the public funds of wards or villages. Sums of money contributed, tuition fees, and money realized from school lands are added also to the fund. Private schools are maintained by the fees demanded for instruction or by the contributions from private individuals.

The grounds occupied by schools, which are organized by the different departments, are in every case Government lands. The grounds occupied by schools established by Fu or Ken are also in most cases Government lands, but in a few cases land jointly owned by the people is added to the Government land. The grounds occupied by schools organized by the wards or villages are jointly owned by the people or are sometimes the property of private individuals.

When wards or villages establish at the public expense any schools,

such as elementary, secondary, professional, agricultural, commercial, or industrial schools, Government land not in use, if there be any in the place, is granted for school purposes at the request of the people of the locality.

The proportion is as follows: Five hundred tsubo (1 tsubo is about 36 square feet) for each elementary school and 1,000 tsubo for any other school. The land actually occupied by the schools is exempted from taxation. Again, the land possessed by all public agricultural schools and provided for practical or experimental use is exempted from taxation in the proportion of 5 chô (3,000 tsubo) for each school, and when Government land is required to provide farms for practical or experimental use, land not exceeding 5 chô is granted for such use without any payment or rent being required.

Prior to the Restoration (1868) the expenditures of scholastic institutions were defrayed out of the national treasury or by the provincial governments. After the department of education was established, school fees were made the principal source of income, and additional aid was granted from the treasury to the schools under direct control of the department. The schools under Fu and Ken were aided by school district rates, voluntarily contributions, and interest accruing from accumulated school funds. In 1878 great changes were effected in provincial financial administration. The expenses of schools established by Fu and Ken were defrayed out of local taxes, and if the towns or villages needed aid from local taxes, the local assemblies decided upon the amount to be given for such purpose. The taxes levied were (1) one-fifth or less (afterwards increased to one-third) of the land tax; (2) licenses and other miscellaneous taxes; (3) taxes on inhabited houses. The law of 1879 left it to the discretion of local authorities whether school fees should be charged or remitted. This greatly decreased the income from school fees and increased village rates. The regulations of 1884 restricted the powers of local assemblies; Ku, town and village rates were assessed on the value of lands, or licenses, and on every landowner. A limitation was placed upon the rates in 1885, so that they were not to exceed one-seventeenth of the land tax. This caused a decrease of more than 10,000 yen in a single Fu or Ken. In 1886 the general regulations prescribed that school fees should be appropriated for the support of higher and lower grade elementary schools of Fu and Ken. To these were to be added such sources of income as voluntary contributions, etc. If simple elementary courses took the place of the ordinary elementary school, then the same should be maintained out of Ku, town, or village rates, and the salaries of teachers out of local taxes.

Investigations extending over a series of years, in regard to the maintenance of lower and higher grade elementary schools, indicated that, in 1888, of the total number of schools nearly seven-tenths required no assistance from city, town, and village rates; in 1889 none was required from five-tenths of the number; in 1890 the proportion went down

to four-tenths. This was attributed to the decrease in the amount of school fees and voluntary contributions. Formerly the amount of city, town, and village rates was not allowed to exceed half the amount of school expenditure, but alterations in local administration changed matters; the amount of tuition fees in ordinary grades decreased and contributions diminished. The amount of income of public schools in 1890 from tuition fees was 2,221,534.528 yen; from voluntary contributions, 428,295.328; interest on various funds, 441,856.050; city, town, and village rates, 4,518,458.401; local taxes, 1,145,372.052; miscellaneous, 224,627.062; a total of 9,879,808.143 yen. The rate per cent of population was 0.239. An increase in the items of city, town, and village rates, school fees, and miscellaneous income was manifest over the preceding year, but a decrease in the other items. Of the above income the portion chiefly appropriated to the support of elementary schools was 8,371,289.836 yen, showing an increase over the previous year of 275,574.809.

Income of public elementary school by grade in 1890.

Grades.	Tuition fees.	School funds and other income.	City, town, and village rates.	Local taxes.	Total.
	Yen.	Yen.	Yen.	Yen.	Yen.
Elementary schools:					
Higher.....	589,099.804	203,471.126	598,787.472	2,355.410	1,393,713.812
Second division.....	1,500,341.530	1,235,559.225	2,713,847.991	3,684.669	5,453,433.415
Lowest.....	2,646.628	358,928.805	1,136,329.403	26,237.773	1,524,142.609
Total.....	2,092,087.962	1,797,959.156	4,448,964.866	32,277.852	8,371,289.836
In the year—					
1889.....	2,091,557.933	1,884,044.147	4,078,965.216	41,147.731	8,095,715.027
1888.....	1,890,345.190	2,135,091.711	3,943,458.997	51,188.589	8,020,084.487
1887.....	1,150,039.790	1,337,638.009	3,103,191.992	72,862.654	5,663,732.445

An investigation of the amount of school fees paid indicates that none of the pupils pay less than 5 sen (5 cents) in the Ken of Saitama, Chiba, Tochigi, Aomori, Yamagata, Akita, Gifu, and Okayama, while in the Ken of Ishikawa, Oita, Saga, and Kumamoto none pay more than 30 sen (30 cents). In the Fu of Tokio one-half of the total number of pupils pay over 30 sen (30 cents). In the Ken of Miyazaki, Kagoshima, and Okinawa 25 sen is the highest fee paid by the pupils.

Amount of voluntary contributions to public schools in 1890.

Items.	Money.	Grounds.	Buildings.	Books.	Apparatus.	Miscellaneous.	No. of contributors.
	Yen.	Tsubo. ^a	Tsubo. ^a	Copies.	Copies.	Yen.	
Elementary schools.....	400,204.193	30,628.46	1,819.20	12,459	15,521	4,741,889	403,655
Lower grade normal schools.....	700.900	.....	.....	1,067	138	1,760	361
Lower grade secondary schools.....	49,064.516	.....	.....	278	.....	.....	78,138
Special schools.....	77.041	.....	.....	130	.....	35,000	548
Miscellaneous schools.....	7,074.113	.....	.....	1	4	.....	954
Kindergärten and libraries.....	265.491	.....	.....	88	44	15,000	1,026
Total.....	457,386.254	30,628.46	1,819.20	14,023	15,707	4,793,649	484,682
Decrease for the year.....	36,122.102	260,235.12	2,351.77	4,971	1,394	6,751,638	256,382

^aThe Tsubo equals about 36 square feet.

Expenditure.—The expenditure of the department of education during 1890 was as follows: General expenses, 184,198.093 yen; expenditure for building official residences for private secretaries to the minister, 3,375.616 yen; various other buildings, 2,052.253; for building elementary schoolhouses to be exhibited at the National Industrial Exhibition, 699.455; special expenses for foreign journeys, 6,261.600; total, 196,587.017 yen. The amount of expenditure paid out by the Government to the various institutions included: Imperial University, 249,302.000 yen; school of agriculture and forestry, 38,194.000; higher normal school, 29,250.000; higher normal for females, 21,166.500; first higher secondary school, 66,371.250; second higher secondary school, 33,518.250; third higher secondary school, 47,325.855; fourth higher secondary school, 33,540.000; fifth higher secondary school, 37,914.000; higher commercial school, 25,519.500; Tokio technical school, 26,491.500; Tokio Academy of Fine Arts, 13,125.000; Tokio Academy of Music, 7,291.000; Tokio Blind and Dumb School, 2,250.000; Tokio library, 6,000.000; total, 637,259.355 yen. The total amount for 1890 of Fu and Ken educational expenses, and of educational aid to cities, towns, and villages defrayed out of the local taxes voted by the Fu and Ken assemblies, was 1,188,002.562 yen. This was divided as follows: Lower grade normal schools, 804,516.128 yen; lower grade secondary schools, 238,991.769; special schools, 69,206.905; various schools, 12,518.902; expenses for educational societies and educational encouragement, 9,953.487; expenditure for pupils sent away from the jurisdiction of their respective Fu and Ken, 1,948.000; educational aid to cities, towns, and villages, 50,867.371. The total expenditure for the public schools in 1890 was 8,675,140.109 yen, which is itemized as follows:

Table showing expenditures for public schools in 1890.

Classification.	Yearly expenditure.	Increase for the year.	Decrease for the year.
	Yen.	Yen.	
Salaries of directors.....	562,197.557	25,405.859	
Salaries of teachers and conductors.....	3,192,374.289	196,687.197	
Salaries of pupil teachers.....	1,806,743.625	78,084.990	
Other salaries.....	512,215.195	43,085.811	
Miscellaneous salaries.....	286,732.547	9,420.548	
Pupils' expenses.....	306,159.916	18,143.260	
Rent of grounds and buildings.....	121,670.874	3,732.603	
Books and apparatus.....	424,677.819		10,042.427
Buildings and repairs.....	737,317.242		49,266.636
Miscellaneous.....	725,051.045	2,590.799	
Total.....	8,675,140.109	317,850.704	

Divide this amount among the different schools, averaging the number of schools and pupils, the result is as follows:

Classification.	Amounts disbursed.	Average amount for each school.	Average amount for each pupil.
	Yen.	Yen.	Yen.
Elementary schools.....	7,357,679.918	291.082	2.422
Middle schools.....	297,458.597	6,917.642	29.998
Normal schools.....	800,307.186	17,027.812	151.144
Special schools.....	131,695.009	5,725.870	46.254
Miscellaneous schools.....	47,884.887	1,496.403	16.903

There was also expended for kindergärten 20,455.645 yen, and 19,658.867 yen for other items, which makes a total of 8,675,140.109 yen, and the rate per pupil is 2.422 yen. Compared with the previous year, there is a general increase in all items for elementary schools, a decrease in the amount for secondary and special schools, while in normal and miscellaneous schools an increase has taken place in the amounts disbursed and in the average amount for each school, and a decrease in the average amount for each pupil.

SUPERVISION AND ADMINISTRATION.

State control.—The governmental supervision of education is under the department of education, which is one of ten departments. The minister of education has control over all affairs connected with education throughout the country, and with respect to educational affairs he superintends the governors of Fus and Kens. There are senior and junior vice-ministers, who assist him in the discharge of his duties; secretaries, who manage special business intrusted to them, under the orders of the minister, and subordinate officials who transact whatever business is assigned to each of them respectively.

The minister of education prepares drafts in regard to the establishment and abrogation of such laws and regulations as are connected with education, and submits them to the Emperor for approval. He also signs such laws and regulations and is responsible for them. The minister has the right of nullifying any educational regulations made by the governors of Fus and Kens if such regulations do not meet with his approval. In order to carry on the business of the department the following bureaus are organized within the department, as is stated in the "General Outlines of Education in Japan in 1884," viz:

Bureau of special school affairs (to conduct business concerning higher and special education); bureau of general school affairs (to conduct business concerning general education); bureau of compilation¹ (to conduct the business of writing and compiling books necessary to education); bureau of finance (to conduct financial business, constructions, and repairs); bureau of general business (to conduct business connected with official regulations for the officers of the several bureaus of the department, the schools under its control, and miscellaneous business not undertaken by the other bureaus); bureau of report (to conduct business concerning reports, statistics, etc., of education); office of private secretaries (belonging to the private office of the minister and vice-ministers, having charge of business concern-

¹A reorganization of these bureaus seems to take place from year to year, but the business transacted does not seem to vary greatly from what is stated above. In 1890 the bureau of compilation was abolished and a division was created in the bureau of general supervision for the transaction of business. Again, in 1891, another reorganization took place, all bureaus of the department of education being abolished. The department was then reorganized with the minister's cabinet, bureau of general school affairs, bureau of compilation, and bureau of treasury. A board of inspection was also established in the department. These various reorganizations do not seem to have materially affected the general business mentioned above, hence the changes are simply indicated in form of note.

ing appointment, dismissal, promotion, etc., of officers under the control of the minister); documentary examiner's office (to examine the drafts of laws and regulations); office of prize affairs (to conduct business connected with the pensions of teachers and with educational awards); institute of music (to conduct business concerning inquiries as to singing and general improvement in music); office of reports for the Government Gazette (to conduct the business of collecting and arranging, in proper order, the laws, regulations, writings, reports, etc., necessary to education which are to be published in *Kuwanto* (the Government Gazette)). The chief of each of these bureaus has a secretary, and in some cases an assistant chief is also appointed.

The minister and vice-minister visit from time to time the schools of *Fu* and *Ken*, or send subordinate officials to every place to inspect the actual condition of education. Those officers afterwards present reports to the minister concerning the results of their inspection. The governors are bound to present every year detailed reports of education within their jurisdiction; and the heads of the school under the control of the Department are also obliged to present reports on the results of instruction. The minister then has all these reports arranged in proper order, and after making his own remarks, and adding statistics, presents them to the Emperor under the title of the Annual Report of the Department of Education. This report is afterwards made public to show the condition of local education.

The minister of education has organized an academy in order to inquire into matters concerning education and to discuss subjects connected with the science and art of education. The members were chosen by the minister himself, and the remainder have been elected from time to time by the vote of the members, their tenure of office being one year. As a rule, they meet once a month in the department of education. The directors, librarians, curators, teachers, etc., of the schools, libraries, museums, etc., under the control of the department of education are appointed and dismissed in different ways, according to their rank, those of the class of *Sōnin* by the vice-minister of education and those of the class of *Hannin* by the minister himself.

Since the presentation of the above regulations for State supervision of educational affairs there have been minor changes, particularly in 1885 and 1886, but in the main the officers are the same. The minister of education¹ is now called the minister of state for education, and there is one vice-minister of state for education in place of the senior and junior men of previous years, but these modifications do not materially modify the above statement.

Local control is, as heretofore stated, not uniform. Sometimes there are committees of inspection appointed from among the school officers, or the inspections are conducted by officials of *Gun* or *Ku*. In sixteen *Kens* supervising teachers are appointed for the purpose of improving educational systems. In other *Kens* teachers of normal schools exercise such supervision. In general, it may be stated that all the

¹ Although educational affairs throughout the Empire are under the control of the minister of state for education there are schools for the teaching of special subjects under the control of and maintained by other governmental departments, i. e., the department of the imperial household; the military and naval departments; the department of justice; the department of agriculture and commerce; the department of communications, and the Hokkaidō administration board. The high standard which these institutions have attained will be brought out on the following pages.

local authorities attend to the educational administration in their respective districts.

In 1884 the local regulations were as follows, and the changes since have not materially modified the provisions:

There are school committees specially organized in wards or villages to conduct the various matters concerning the school attendance of children, the establishment and maintenance of schools, etc., under the supervision of the governor. They are nominated in each school district by the people of that district, and then the governor selects a certain number of those thus nominated. The tenure of office of the school committees is not less than four years, and is fixed according to circumstances. Their number, salaries, etc., are determined by the ward or village assembly with the approval of the governor. In case any committeeman is incapable of discharging his duty, after he has been appointed, the governor causes another nomination to be made.

Persons qualified to serve as members of school committees, or to take part in the appointment of the same, must be males upwards of 20 years of age, possessing either lands or buildings, and having both legal and actual residence within their respective school districts. The Kochô takes part in the business of school committees in his own school district.

When several wards or villages unite together and establish such schools as professional schools, middle schools, etc., independent of the limit of the school district in which elementary schools are organized, they nominate special school committees within the limit of the school district thus formed. The regulations as to the mode of nomination, appointment, functions, etc., are the same as those adopted in the case of school committees of school districts. Regular educational inspection takes place annually, and there are special educational tours made by officials designated for that purpose.

This is, as far as can be ascertained, the general method of procedure in the diverse districts on the many islands comprising the Empire of Japan. From year to year there are variations of the same, but to date there seem to be no permanent changes materially affecting the above statement.

TEACHERS.

Preparation.—The law appertaining to education is very explicit in regard to the preparation of teachers. According to the various articles therein contained normal schools for the training of teachers for elementary schools are to be established in each Fu or Ken; they are to grant certificates to their own and other students who, upon examination, are found to be duly qualified; teachers¹ of either sex are to be over 18 years of age; all teachers² of elementary schools must possess a certificate from a Government or normal school. The first normal school dates from 1872 and was founded with senior and junior classes in Tokio. A foreign teacher was employed who taught the seniors as if they were pupils of an elementary school, and they, while thus learning methods

¹ No persons guilty of immoral conduct shall be employed as teachers.

² It shall be lawful for any person to be employed as a teacher within the jurisdiction of Fu or Ken without a certificate from a normal school, provided he possesses a teacher's license granted by the governor of said Fu or Ken.

of teaching, in turn gave instruction to the junior pupils. Soon after a practice school was established, so that the pupils might be better grounded in methods, and in 1873 normal school courses with higher and lower grades were instituted. So great was the call for women teachers that, in 1874, a normal school for women was established in Tokio, which school was merged into the Tokio Normal School in 1885.

Admission to normal schools of persons above seventeen years of age was based upon good moral character, sound health and constitution, and attainments equivalent to those of graduates of the second division of elementary schools. The course of study at this early date was modified from year to year, but general regulations governing the normal schools were first issued in 1883. The instruction was based upon "the fundamental principles of human relations, such as loyalty and filial conduct." The number of pupils to be admitted was fixed at "one for every 1,500 of school population within each jurisdiction." Pupil's expenses "were as a rule to be paid out of the school allowance, with a provision that the same expenses might be granted as loans, or some of the pupils might be admitted at their own expense, according to the discretion of the highest officials of city or province. From 1883 on, steady progress was observed in the work of normal-school training. This was due in part to methods introduced by students who had been sent to foreign countries to investigate normal-school matters, and who had returned and engaged in the work of education. In 1886, according to a decree promulgated by the Emperor, normal schools were divided into higher and lower grade normal schools. The higher normal was to be established at Tokio under the direct control of the minister of state for education, and in each Fu and Ken there was to be a lower grade normal school. The object of the higher normal is to train directors and instructors of lower grade normal schools; that of the lower grade normal is to train the directors and instructors of public elementary schools. All expenses of pupils are to be paid out of the school allowance. Included in the course of study in normal schools is military drill, for it is conceded that "the proper aim of normal training is to develop in pupils the characteristics of obedience, sympathy, and dignity." The four years' course of study in the lower grade normal school includes ethics, science of education, Japanese language, Chinese literature, English language, mathematics, bookkeeping, geography, history, natural science, physics, chemistry, agriculture, handiwork, household management, writing, drawing, music, and gymnastics. The male pupils are taught agriculture, handiwork, and military exercises; the women learn domestic economy. The regulations for admission to the lower grade normals require a completion of the higher elementary course, legal residence within Fu or Ken, and that the pupil be between 17 and 20 years of age, if men, and between 15 and 20, if women. Graduates of lower grade normals are under obligation to serve as teachers during a ten years' period.

The higher normal school is divided into three sections, *i. e.* (1) physical and chemical science; (2), natural science; (3), literature. The first includes the science of education, ethics, English language, mathematics, physics, chemistry, handiwork and drawing, music, and gymnastics; the second (in addition to the science of education, ethics, the English language, drawing, music, and gymnastics) has organic chemistry, mineralogy, geology, botany, zoölogy, physiology, and agriculture; the third (in addition to the science of education, ethics, music and gymnastics, and English language) includes Japanese language and Chinese literature, geography, history, political economy, and philosophy. The course of study in the woman's division varies somewhat from the above, but includes housekeeping and household management. Admission to the higher normal is from the normal schools of Fu or Ken, or from among persons of literary and other qualifications when nominated by the governing officials of Fu or Ken, and selected by the director of the higher normal school. The male graduates are to serve for ten years after graduation, three years of which must be in such schools, and at such salaries as the department of education may decide. The women are under obligation to service in schools for five years after graduation, for the first two years in any schools to which the department of education may assign them.

Licensing and appointment.—Candidates for the position of teacher in elementary schools must be upward of eighteen years of age, and must possess either the certificate of a normal school, a teacher's license, or certificate of qualification in a certain subject given by the governor of Fu or Ken. The length of time for which certificates are granted is mentioned above. The normal certificate is good for the whole country; the license given by the governor is only available within the jurisdiction whence given. The teacher's license is given by the governor after examination concerning the candidate's knowledge, in accordance with the directions for granting teacher's licenses¹ issued

¹ Regulations (1886) are as follows: There are general and local licenses; the former granted by the minister and valid throughout the country; the latter by the governor of Fu or Ken, and valid within the jurisdiction whence issued. General licenses are valid for life; local, for life or a stated period, *i. e.*, five years, with privilege of renewal if the person be competent. General licenses are granted to graduates of the higher normal, or to those who, having possessed local licenses, and having served five years or upward, are eminent both in attainments and teaching. Local licenses are granted to graduates of the lower grade normal schools, or to those who have passed the examinations for elementary-school teachers. The examinations for elementary-school teachers are to be conducted in accordance with the "subjects of study and the standard to be attained in the lower grade normal schools." Licenses are not to be granted to (1) those who have been subject to imprisonment or who have committed a crime against public morality; (2) who have been subject to punishment for gambling; (3) who have been adjudged bankrupt and not discharged their obligations; (4) guilty of minor debts, drunkenness, or violence; (5) subject to penal servitude, imprisonment, or solitary confinement, according to law. The regulations require that fees shall be paid by those who undergo examinations, and by those who receive licenses for elementary-school teachers.

by the minister of state for education. The license enables the person to teach in one of the three courses of elementary schools according to the capacity shown in the examination. In any locality where no teacher can be found qualified for any one of the elementary divisions, then those qualified for any one or for several subjects may be substituted. Scholars eminent in learning, who are competent to instruct in moral teaching, or those who have a good knowledge of agriculture, industry, and commerce, may obtain teachers' licenses for the particular subject without examination. Teachers of schools which belong to ward or village [an elementary-school district may consist of a single ward or village or of several wards or villages combined] shall be appointed or dismissed by the governor of Fu or Ken at the request of the school committees. The regulations promulgated by the department of education as to the licensing of school-teachers are as follows:

Licenses as instructors in lower grade normal schools are to be granted to graduates of the male normal course; licenses as instructors in the female lower grade normal-school course are to be granted to graduates of the female normal course, and licenses as instructors of gymnastics to be granted to graduates of the special course of gymnastics in the higher normal school.

Licenses may be granted to nongraduates after an examination in one or more subjects of the lower grade normal-school course, and in regard to moral character and physical constitution.

The teachers of secondary schools must be either normal graduates or university graduates. Still the governor of Fu or Ken may engage persons whom he considers qualified for such purpose, licenses being given after an examination as to moral conduct and intellectual attainments.¹ Men of known learning, and who are skilled in imparting instruction, who hold diplomas of some kind or other and are known to have knowledge of agriculture, industry, and commerce, may be exempted from such examinations.

The *examinations* and *tenure of office* are so clearly presented in the regulations governing licensing and appointment that no more detailed statement seems necessary. In 1891 it was determined that provisional licenses should be granted, if deemed necessary from local considerations, to candidates for the post of elementary school teachers after due inquiry as to the qualifications of such persons.

Salaries.—The rank and salary of the directors and teachers of public schools are determined by the governor of Fu or Ken, subject to the approval of the minister of state for education. The rank and

¹The subjects of study to show the intellectual attainments of the candidate include Japanese and Chinese literature, English, French, and German; arithmetic, algebra, geometry, trigonometry, analytical geometry, mechanics, surveying, astronomy, physiology, zoölogy, botany, mineralogy, geology, physics, chemistry, geography, history, political economy, Japanese law, mental science, logic, science of education, writing, drawing, bookkeeping, singing, gymnastics, agriculture, industry, and commerce. Candidates are to be examined in one or more of these subjects according to choice. The license indicates the subjects in which examined.

salary of directors and teachers of the schools organized by other departments than that of education are determined by the ministers of the respective departments, and are therefore different one from the other. The salaries of teachers are in part paid out of the local taxes. The officials in charge of such matter in cities, towns, and villages are to make provision for paying "the salaries, traveling expenses, etc., of elementary teachers," the amounts to be fixed by the Fu Chiji and Ken Chiji after consultation with the city council or similar officials in towns or villages.

The right to the use of a certain area of land or payment in kind may be substituted for certain portions of the salaries of teachers in city, town, or village elementary schools, the proportion to be fixed by the Fu Chiji or Ken Chiji, subject to the approval of the minister of state for education.

The salaries of directors of Fu or Ken normal schools are to be paid out of the national treasury. The titles and quasi-official ranks of persons employed in Fu or Ken ward or village school consist, in normal and secondary schools, of directors from the eighth through the thirteenth rank, and of instructors and assistant instructors from the first through the third rank; in elementary schools of directors from the eleventh through the seventeenth rank, and of teachers from the first through the seventh rank. The rank and title of persons employed in professional schools, agricultural, commercial, and industrial schools, are established in conformity with the above. The amount of salary given in the university and in the governmental schools under the control of the department of education is as follows:

Official titles.	Official ranks.	Amount of annual salary.							
		Yen.	Yen.	Yen.	Yen.	Yen.	Yen.	Yen.	Yen.
Rector	Chokunin <i>a</i>	4,800	4,200	3,600	3,000	.....	.....	.....	.....
Deans of faculty, directors, librarians, and curators.	Sônin	3,000	2,400	2,100	1,800	1,500	1,200	960	.....
Professors	Chokunin	4,800	4,200	3,600	3,000	.....	.....	.....	.....
	Sônin	3,600	3,000	2,400	2,100	1,800	1,500	.....	.....
Assistant professors	Sônin	1,800	1,500	1,200	960	.....	.....	.....	.....
	Hannin	1,200	960	840	720	600	.....	.....	.....
Instructors	Sônin	3,000	2,400	2,100	1,800	1,500	1,200	960	.....
	Hannin	1,200	960	840	720	600	.....	.....	.....
Assistant instructors	Hannin	600	540	480	420	360	300	240	.....
Teachers	Hannin	540	480	420	360	300	240	180	144
Clerks <i>b</i>	Hannin .....	.....	.....	.....	.....	.....	.....	.....	.....

a The Chokunin is a class of official from the first to the third rank, who is directly appointed by the Emperor.

b The clerks are divided into classes 1 to 10; the official rank and salary are the same as the clerks of Government departments.

Pensions.—The granting of pensions is decided by the minister of state for education on certificates presented by the Fu Chiji or Ken Chiji. The directors and regular teachers in normal, public secondary schools, and the teachers of elementary schools who have been in office more than fifteen years receive life pensions when they have been ordered to retire after having attained 60 years or have retired owing to physical disability, or because of the closing or reorganization of schools. Those who come under any of the following conditions shall receive life pen-

sions and be granted additional pensions up to seven-tenths of the minimum sum of such pensions, though their years of service may not amount to the above, viz, if they have lost one or more limbs or met with similar accident, or had long sickness unfitting them for discharge of duty. As regards the officials of the Government or public schools, who are to be put on the same footing as the directors and regular teachers, and who have been transferred as such to any of the latter schools, the years of service in their former schools shall be included in computing the term of service for granting pensions. They are disqualified, however, from receiving pensions if they have committed acts warranting dismissal, have been subjected to imprisonment, have lost their status as Japanese subjects, have engaged in the public service without permission from Fu Chiji or Ken Chiji, have retired from office for their own convenience before attaining 60 years. Provisional teachers in normal, secondary, or elementary schools receive life pensions equal to one-fourth of salary at time of retirement.

The directors and regular teachers in Fu or Ken normal schools, and in public secondary schools, shall be granted a sum equal to one month's salary received at the time they retire, in case of retirement after service of more than one year or less than five years, or a sum equal to two months' salary in case of retirement after service of more than five years or less than eleven years, or a sum equal to three months' salary in case of retirement after service of more than eleven years or less than fifteen years. The amount is to be provided for by the city, town, or village where the persons belong at time of retirement. The regular teachers in city, town, or village elementary schools shall be granted a sum equal to two months' salary in case of retirement after more than five years or less than eleven years' service, or a sum equal to three months' salary in case of retirement after more than eleven years or less than fifteen years' service. The families of deceased directors and teachers are also entitled to pensions, if the minister of state for education approves, and the Fu Chiji and Ken Chiji request it. Directors and regular teachers of normal or secondary schools shall pay in annually 1 per cent of their salary into the national treasury, and regular teachers of elementary schools the same amount into the funds of Fu and Ken where they are teaching. The city, town, and village, wherever any of the above schools are situated, are also to pay in a like amount to serve as a pension fund for teachers of different grades. Pensions to retired directors and teachers, pensions and aid to the families of deceased directors and teachers are to be paid out of the grant made by the national treasury, out of the interest of the pension fund, or from other sources of income.

Teachers' Institutes and Educational Societies.—The institutes were formed as early as the year 1872, "for the purpose of discussing and investigating methods of teaching." In 1876 educational officers, school district officials, school teachers, and other officials formed a society for the discussion of important points connected with educational organi-

zation. Its meetings were held in Tokio, and the discussions were limited to educational administration. From that date on various associations were formed in different parts of the Empire and the discussions became more general in character. Societies of this character are noticed under *Supplementary Institutions*.

COURSES OF STUDY.

The Japanese consider the kindergarten to be the basis of education, inasmuch as it fosters in the infant mind good habits and moral instruction, while giving the first impetus to the expanding of the intellectual faculties, and greatly promoting the physical development. In connection with the Tokio Female Normal School the first kindergarten of Japan came into existence in 1876. The children, if not less than 3 years and not more than 6 years of age, were divided into three groups, according to ages, and the organization of the school was according to Froebel methods. In 1878 a training course was established for persons between 20 and 40 years of age who desired to be kindergarten teachers, and who were of good moral character, of sound health and constitution, able to read ordinary writing, and were possessed of a general knowledge of arithmetic. In 1880 kindergarten teaching was included in the curriculum of the female normal school for one year previous to graduation. The year 1884 brought about a revision of kindergarten regulations; instead of three groups there was an expansion into six groups, and all infants under school age were to be trained according to the Froebel system. The school connected with the normal was made a model for other kindergärten, a school fee of 1 yen (99.7 cents) a month was charged, and the following schedule of study was adopted. The figures show the number of exercises each week. Twenty minutes each is given to moral instruction and to various object lessons; thirty minutes each to the other exercises and lessons.

Course of instruction for Kindergärten.

	Groups.					
	6.	5.	4.	3.	2.	1.
Assembling.....	6	6	6	6	6	6
Conversations on morals.....	3	3	3	4	4	4
Conversations on various objects.....	3	3	3	2	2	2
Block laying.....	5	5	4	4	2	2
Plank laying.....	2	2	2	2	2	2
Stick laying.....	1	1	1	1	1	1
Ring laying.....	1	1	1			
Peas work.....				1	1	1
Bead joining.....	2	2	1	1		
Paper plaiting.....	2	2	2	2	1	1
Paper folding.....	2	2	2	2	1	1
Paper perforating.....				1	1	1
Embroidery.....					2	2
Paper cutting.....					1	1
Drawing.....			1	2	2	3
Counting.....	1	1	1	2	2	2
Reading.....				2	3	5
Writing.....				1	2	3
Singing.....	6	6	6	6	6	6
Games.....	6	6	6	6	6	6
Total.....	40	40	40	45	45	45

The elementary schools are designed to give children the rudiments of moral and intellectual education adapted to make them good members of the community, together with such general knowledge and skill as are necessary for practical life, due attention being paid to their bodily development. As heretofore stated the elementary schools are divided into lower elementary and higher elementary schools. The course in the former extends over three or four years; in the latter over two, three or four years. Supplementary courses of a more elementary or a higher course may be established in both of these groups of elementary schools. Apprentices' schools and supplementary schools for technical instruction are classed under the head of elementary schools. The subjects of study and the length of the course of study for special courses, supplementary courses, apprentices' schools, and supplementary schools for technical instruction, are arranged according to the orders of the minister of state for education. Certain subjects of study may be made optional in the elementary schools. In Fu and Ken regulations governing the elementary schools of the jurisdiction are to be drawn up by the highest administrative officers according to the standard outlines prescribed by the minister. The course of study has varied somewhat from year to year, local circumstances governing the changes. After the establishment of a constitution and the general educational revision, which took place in the various grades of education, an imperial ordinance more clearly defined the courses in elementary schools. Instruction is given in the ordinary elementary schools in morals, reading, composition, writing, arithmetic, and gymnastics, but, if local circumstances require, gymnastics may be omitted and the history and geography of Japan, drawing, singing, and handiwork, may be added. In the higher elementary schools the geography of foreign countries and science are added, and sewing for women. But here, as in the ordinary course, if local circumstances require, geography of foreign countries and singing may be omitted, and the elements of geometry, a foreign language, agriculture, commerce, and handiwork be added.

Any person desiring to give similar instruction in a private school can do so by obtaining permission of the governing authorities of city or town.

The course of study in secondary schools was, by the education act of 1872, to serve as a supplementary course to that of the elementary schools, but the subjects varied so in the different localities that new regulations had to be adopted. Commencing with a course varying between two and six years the secondary schools were gradually changed to lower grade secondary and higher secondary schools. In 1886 an imperial ordinance was issued which defined the secondary school as an institution "to prepare pupils either for practical occupations or for admission to the higher educational institutions." The higher secondary schools, one of which is to be established in each of the five sections into which the country is divided, are under the direct control of the department

of education; the lower grade secondary schools are to be established in each Fu or Ken, the subject of study and standard to be obtained being indicated by the local authorities, but subject to regulations from the educational department. The course of study in lower grade secondary schools extends over five years; candidates for admission "must be of good moral conduct, of sound physique, over 12 years of age, and prove themselves competent to pursue the course."

The curriculum is as follows:

Curriculum of lower grade secondary schools.

Subjects.	Fifth year.		Fourth year.		Third year.		Second year.		First year.	
	Hours per week.	Study.	Hours per week.	Study.	Hours per week.	Study.	Hours per week.	Study.	Hours per week.	Study.
Japanese language, Chinese literature.	5	Reading and para-phrase [sentences mixed with Chinese characters]; dictation and composition [sentences mixed with Chinese characters and letter-writing].	5	Reading and para-phrase [sentences mixed with Chinese characters and Chinese sentences]; dictation and composition [continued].	5	Reading and para-phrase [sentences mixed with Chinese characters and Chinese sentences]; composition [continued].	3	Reading and para-phrase [sentences mixed with Chinese characters and Chinese sentences]; composition [sentences mixed with Chinese characters].	2	Reading and para-phrase [Chinese sentences]; composition [continued].
English.....	6	Reading and explanation; dictation, conversation, and spelling.	6	Reading and explanation; dictation, conversation, and composition.	7	Meaning, conversation, composition, and grammar.	5	Meaning, conversation, composition, and translation.	5	Reading and para-phrase [Chinese sentences]; composition [sentences mixed with Chinese characters].
German or French.....							4	Reading and explanation, dictation, conversation, and spelling.	3	Reading and explanation, dictation, conversation, and composition.
Agriculture.....							4	Sowing, pasturage.....	3	Pasturage, gardening, and planting.
Geography.....	1	Outlines of Japanese geography.	2	Geography of Asia and Europe.	2	Geography of America, Australia, and Africa.	1	Physical and political geography of Japan.	.....	.....
History.....	1	Japanese history.....	1	Universal history.....	2	Chinese history.....	1	Japanese history.....	2	Universal history.
Mathematics.....	4	Arithmetic, elementary geometry.	4	Review of arithmetic, algebra, geometry.	4	Algebra, geometry.....	4	Algebra, geometry.....	3	Algebra, trigonometry.
Natural history.....	1	Object teaching of natural history.			2	Physiology and hygiene.			3	Zoölogy and botany.
Physics.....			1	Object teaching.....					3	Force, material heat, sound, light, electricity, magnetism.
Chemistry.....			1	do.....	2	Inorganic chemistry.....				
Gymnastics.....	3	General exercise.....	3	General exercise.....	3	General exercise.....	5	Military exercise.....	5	Military exercise.

Ethics, which include the principal points of human relations and of morals, are taught for one hour each week in each of the five years. Writing two hours a week in the fifth year and one hour in the fourth year. Drawing two hours a week in all except the first year, where it is only taught one year. Singing two hours each in the fourth and fifth years. The total number of hours for each branch is twenty-eight each week.

Applicants for admission to the higher secondary schools must have completed the lower grade secondary school course, be of good conduct and health and upward of 17 years of age. The course of study covers two years, and a preparatory course extending over three years may be added. Medical departments have also been added to the five higher secondary schools, the course covering four years. This development plainly shows that the organization of secondary schools has become more complete and practical, and that they are an intermediate step to the university. The length of school term is forty weeks each year; the general subjects of study include Japanese language and Chinese literature, English, French, or German, Latin, geography, history, mathematics, zoölogy, botany, geology, mineralogy, physics, chemistry, astronomy, political economy, philosophy, drawing, dynamics, surveying, and gymnastics. The standard to be obtained is such that the historical studies extend over the histories of Greece, Rome, Germany, France, England, and America; mathematics, through the first notions of plane and analytical geometry, elements of theory of equations, differential and integral calculus, dynamics through kinematics, dynamics of solids and fluids; gymnastics include military exercises; drawing is subdivided into the heads of descriptive geometry and mechanical drawing. The medical course extends over four years and comprises the English language, zoölogy, botany, physics, chemistry, anatomy, history, physiology, materia medica, pathology, surgical pathology, medicine, surgery, ophthalmology, obstetrics, and gynæcology, medical jurisprudence, hygiene, and gymnastics.

The course of study in the normal schools has been so fully brought out under "training of teachers" that it will only be necessary to add the fact here that in 1886 an extensive revision was made in the regulations relating to the qualifications of pupils to be admitted to normal schools as well as those relating to their services after graduation. Military training was then first introduced with a view to producing the best possible teachers, and good results have followed. It is stated, in 1890, that the supply of teachers is inadequate to the demand, and that the "number of pupils adequate to the needs of the country can not be trained in the normal schools, owing to the officially fixed number of pupils and the limited length of the courses of study." The duties of nearly six-tenths of the teachers are performed by pupil teachers, and unless a scheme to establish teachers' institutes for special training is carried out the same complaint will be heard in future.

The education of girls has been somewhat neglected in Japan, yet as early as 1872 the Tokio Female School was organized by the department of education. Pupils between 8 and 15 years of age were admitted to it at that date, but since then the candidates for admission must have completed the elementary course and be between 14 and 17 years of age. Similar schools have been established elsewhere during the 20 years since those first efforts were made, but it is still stated that

woman's education has made but little progress as compared with that of the boys. Again, it is difficult to give particulars in regard to advancement, as in some cities female schools are established as a part of the lower grade secondary schools. In 1872 the subjects of study in a 6 years' course were Japanese literature, English language, handiwork, and miscellaneous work. Mathematics, writing, composition, singing, and gymnastics were added a few years later, and in 1882 the following curriculum was established, which seems to still be the one on which the instruction in such schools is based:

				2	Human body	4	In general; common minerals; common vegetables.		
Natural history									8
Drawing									20
	2	Coloring		2	Mechanical drawing; coloring.	2	Common animals	2	Pencil drawing; ink drawing.
	2	do		2	Mechanical drawing; ink drawing.	2	do	2	do
Sewing									44
	5	Knitting, cutting, etc.		5	Clothes of adults; trousers, socks, etc.	4	Clothes of adults; belts, coats, etc.	4	Clothes of small size; clothes of middle size.
	5	Fukusa, embroidery, etc.		5	Clothes of adults; coats, trousers, etc.	4	Clothes of adults.	4	do
	2	Mode of preserving flowers; mode of burning incense; mode of folding papers, etc.		2	Sitting etiquette; chagi [etiquette in tea party].	2	Standing etiquette; chagi.	1	Sitting etiquette.
Etiquette									16
	2	Sitting etiquette; mode of preserving flowers.		2	Sitting etiquette; chagi.	2	do	1	do
	4	Hygiene; training of children; nursing of patients.		2	Lodging; furniture; cooking.				
Household management									10
	4	Garments; washing; hair-dressing; income and expenditure; employing servants, etc.							
	4	Three-part singing; play with koto.		4	Outlines of harmony; round singing; two-part singing; play with koto.	3	Interval exercise; beating; singing by single voice; play with koto.	3	Preparation; stave; singing by single voice; play with koto.
Music									33
	4	Outlines of harmony; two-part singing; play with koto.		4	Outlines of harmony; singing by single voice; play with koto.	3	Transposition; interval exercise; singing by single voice; play with koto.	2	Preparation; practice of stave; play with koto.

Morals and good conduct are taught three hours each week in each class; physics, four hours each week in the second term of the third year and in the first term of the fourth year; chemistry, two hours each week in the first and second terms of the fourth year; gymnastics, two hours each week in all classes. The totals are thirty hours each week of instruction.

As a fitting climax to the school system comes the university, with its four departments of law, science, medicine, and literature. It dates from an institution of antiquity founded by the Tokugawa government and was remodeled after the restoration in 1868. Since that date its courses have been modified; in 1873 there were added special courses of study in law, chemistry, engineering, polytechnics, and mining; in 1876 it was united with the medical college; in 1885 the law school, which was under the control of the Department of Justice, was merged into the university, and the department of technology was formed with courses in mechanical and civil engineering, applied chemistry, naval architecture, and kindred sciences; in 1886, by means of an imperial ordinance, the university was reorganized as the Imperial University, its curriculum extending over three years in each course, except the four years' course in medicine, and at the same time the school of industrial technology was placed under control of the university. In 1890 the college of agriculture and dendrology was united to the university, and on August 15, 1891, the curriculum of the law school was extended to four years.

The Imperial University has as its object, "the teaching of such arts and sciences as are required for purposes of state and the prosecution of original investigation in those arts and sciences. It consists of the university hall and the colleges. The university hall is established for the purpose of original instruction and the colleges for theoretical and practical instruction." Candidates for admission to the colleges must have received certificates of graduation from a higher secondary school or some institution with similar grade of instruction, or they must prove themselves possessed of equal attainments in the examination held before each college. Persons desiring admission to the university hall are required "to present to the president of the university a written application containing the subjects of investigation to be pursued by them." The president appoints a professor or professors "to superintend the pupil's studies, and all scientific investigations carried on by the students must be made under such supervision." These investigations are not to be prolonged over two years. The course of study in the different faculties is very comprehensive. The law course has two divisions, that of law and political economy. In the first year of the law course the students have instruction in general and Roman laws, civil and criminal codes, in English laws of contract and torts, in general French law, the history of German law, and the law of pandects. In the second year, in the civil code, code of criminal procedure, the constitution, public international law, exercises in civil and criminal pleadings, English commercial and property laws, practical exercises in the law of pandects, German private law. In the third year, instruction in the civil code covers the means by which property is acquired, claims, laws of evidence and of persons, administrative laws, exercises in civil and criminal pleadings. The study of

English law includes commercial law, law of procedure and of evidence; the study of French law includes history, civil and administrative laws. The study of German law includes exercises from the pandects and German commercial law. The fourth year extends the studies to the commercial code, judicial organization and code of civil procedure, private international law, jurisprudence, criminal code, history of legal institutions of Japan, exercises in civil and criminal pleadings, English law of equity, French civil and commercial laws, history of French law, German public and administrative laws, and German bankruptcy law. The section of "politics" includes politics, political economy and its history, statistics, history of institutions and of politics, English, French, and German constitutions, administrative, private and public international laws, civil, commercial, and criminal codes, sociology, history of legal institutions in Japan, and laws of administrative justice.

The college of medicine includes a course of medicine extending over four years and a course in pharmacy extending over three years. The courses include, among other branches, pathology and medical history, surgery, physiology, hygiene, psychiatry, anatomy and histology, pharmacology, chemistry, gynæcology, forensic medicine, and dermatology. While in the law school the average number of hours each week devoted to the different branches is three, in the medical school four appears to be the average. In the college of engineering there are nine courses, each extending over three years. They are civil engineering, mechanical engineering, naval architecture, technology of arms, electrical engineering, architecture, applied chemistry, technology of explosives, mining, and metallurgy. The college of literature also has nine courses, extending through three years, including philosophy, Japanese literature, Chinese literature, Japanese history, history in general, comparative philology, English, German, and French literature. Here, as in the other colleges or faculties, there are professors who are graduates of European or American colleges, and the courses show evidence from the Japanese standpoint of the foreign influences at work throughout these islands. The college of science has seven courses extending over three years, viz, mathematics, astronomy, physics, geology, chemistry, zoölogy, and botany. The college of agriculture is awaiting additional development, but now has a three years' course in agriculture, vegetable pathology, entomology and sericulture, zoötechny, political economy, chemistry, meteorology, forestry, and veterinary medicine.

The university has elective and post-graduate courses, as also regular and subsidiary courses. Changes take place when the needs of the university require, or when new elements are brought in by those persons who have been prosecuting their studies in other countries and have learned of the new developments in different branches of science. There are also scholarships founded by private munificence; one being in memory of Hotakéyama Yoshinari, one of the Japanese best known

to Americans. These scholarships, founded by the zealous scholar who was so powerful an agent in the development of the university from an ancient-language school, are in law and chemistry.

The Japanese have a large class of special schools, which are so diverse in character that, although many of them naturally group here as a part of the school system, they have been classed for convenience's sake under *Supplementary Institutions* and under *Schools of other Departments*.

SCHOOL MANAGEMENT AND METHODS OF DISCIPLINE.

Methods and management.—The educational system is disciplinary in character, inasmuch as habits of obedience are to be inculcated from the earliest school years. Great stress is laid upon this point in the laws and in the imperial ordinances promulgated from time to time, yet no corporal punishment (such as whipping or binding with ropes or cords) is permitted in the schools. The methods employed in order to bring about the best results in the different grades of schools are not especially designated, but may be gleaned from the following: For the management of school affairs all wards or villages must organize school committees, who are to establish elementary schools for children between 6 and 14 years of age. The committees have general charge of the attendance and of the maintenance and establishment of the schools, and yet the parents and guardians are really responsible for the attendance of their children. At the end of every year the school committees are to find out whether all such children have been in attendance, and, if not, what valid excuse there is for absence. The attendance must be of at least sixteen weeks each year, and the length of the school session not less than thirty-two weeks. Pupils of both sexes are not to be taught together in the same room, except in elementary schools. In the lower grade elementary schools not more than eighty children and in the higher elementary schools not more than sixty children may be taught by one teacher. School fees are charged or not, as the case may be, the local officials deciding this matter after due investigation of the circumstances. The teachers, who must be of good moral character and over 18 years of age, are with their schools, frequently subject to local inspection, and even to inspection by persons sent direct from the Department of Education. The results of such inspection are sent to the department annually. As far as possible the teachers endeavor to make the instruction practical in character, and their zealous efforts to train the children under their charge are aided many times through the interest manifested by influential people of the neighborhood, and many teachers have devised methods of their own, both for teaching and managing. School registers are kept in many, if not all, elementary and secondary schools, and

in the most populated Kens the inspectors give favorable reports of the manner in which entries are made in these registers.¹

Promotion of pupils.—The general trend of education and the adoption of methods of European and American schools would indicate that pupils are promoted from class to class after due examination, but this is not distinctly specified. The laws indicate, however, that parents and guardians of pupils are permitted to attend any and all examinations held in the schools.

Study, recitations, and programmes.—The course of study in elementary schools is outlined by the governors of Fu and Ken, but planned by them according to the standard laid down by the minister in charge of education. If any special modifications are required by local circumstances, then the approval of the minister must first be sought. The text-books are chosen by the local authorities with great care, and the Department of Education assumes responsibility for them by examining them from time to time and informing the governors as to the result of such examination. The Department also compiles and publishes text-books to serve as models for authors, and it indicates the general principles which should be incorporated in the books to be used for moral teachings. Divers and many have been the regulations outlined as to text-books during the gradual growth of the school system, but the innumerable changes were found to be injurious to the cause of education. In 1886 regulations for the examination and approval of school books and charts were formulated by the Department of Education, and publishers of text-books for elementary, secondary and normal schools requested the Department to examine those which they desired to present to the public. If satisfactory, certificates, good for a term of years, were given upon payment of a fee varying from 10 to 20 yen. All such measures were taken with a view to the encouraging of learned men to compile text-books, and well-qualified men were selected as a

¹ In "Japan," by J. J. Rein, the methods of teaching are thus described: "The school training of the Japanese boy begins on the sixth day of the sixth month of the sixth year, on which he receives his first lesson in calligraphy with all the observances of etiquette and solemnity which have always characterized the nation in such matters. Provided with the necessary materials, consisting of an ink box (*sumi-ire* or *suzuri-bako*) with a piece of ink (*sumi*), a brush (*fudi*) of the thickness of a little finger, an ink dish (*suzuri*), and usually also a little vessel for holding water, as well as some paper (*kami*), the new pupil is introduced to his teacher, who makes before him, on a large scale, the simple and more complex signs one after the other, and with unwearied patience and unvarying kindness shows him how to copy them. It is not often that the pupil displays any want of attention or earnestness. When he has made repeatedly the same sign, completely covered the paper with hieroglyphics, and thoroughly mastered one form he goes on to the second, and so on. Thus he gradually acquires, in addition to the easy native syllabic writing, a stock of Chinese word-signs. On the lowest calculation, he must master in six or eight years about a thousand. Quicker pupils under competent teachers learn as many as three or four thousand, and scholars as many as ten thousand and even more."

committee on compilation. In 1887 these regulations were revised, so that text-books in elementary schools may be selected or changed by a committee, whose powers are given them by the local governor; the books not to be published by themselves or their relatives, or by members of the school board. Text-books for lower grade normal schools are to be selected by the instructors, subject to approval of the Minister of State for Education.

SCHOOL ORGANIZATION.

Buildings and Grounds.—The same general principle holds good in regard to the school buildings as in regard to schools. Where European customs prevail there is a tendency toward following European models in the style and arrangement of school buildings for the different grades. In country districts, for private schools, and for schools remote from centers of civilization, the Japanese style of architecture, with its one or two story buildings situated in large grounds, may be said to prevail. The higher class schools, being more or less affected by foreign influences on account of the foreign instructors engaged therein, follow in the main the customs of those peoples who have from time to time been drawn to Japan by commercial or other reasons. The ordinary school building is mansion-like in extent, and its pupils go to and fro dressed in Japanese costume, while in the university and higher grade schools European costumes are often seen. The size of rooms varies here as elsewhere, but the general furnishings show the desks and chairs found in other countries, and the methods of teaching are frequently the same as in the Western Continent. In this connection one special feature is noticeable—that is, the Japanese usually prefer the natural color of the woods in their school furniture and in the general furnishings of buildings. Varnished and painted furniture are found in the schools where foreign instruction prevails, but not so in the Japanese schools. According to imperial decrees, all elementary schools are to be provided with buildings, school sites, school appliances, and buildings for gymnastics; and where agriculture is taught there are lands to be provided for practical training. The provisions for such buildings, sites, etc., are prescribed by the Fu Chiji or Ken Chiji, in accordance with regulations issued by the minister of education. As regards the grounds surrounding the buildings, the following statement is clearly of interest: As early as 1874 the Japanese Government granted lands as school sites and exempted such lands from taxation. At that date not more than 1,000 tsubo were granted for secondary schools and not more than 500 tsubo for elementary schools. In 1880 this amount had been increased to 500 tsubo for public elementary schools and 1,000 tsubo for public secondary and special schools, and in 1881 similar governmental provision was made for agricultural, commercial, and industrial schools. In the Hokkaidô (or northern provinces, which have a special administrative board govern-

ing them) forests, plains, seacoasts, and other lands have been granted to the amount of 500,000 tsubo for each school, so as to provide ample resources for the maintenance of schools and for encouraging industrial pursuits.

Hours of school.—In elementary schools the number of school hours is not to be less than three nor more than six hours each day; as a general rule, five hours' daily instruction is given, but the number is arranged by the minister of education. The length of the school session is not to be less than thirty-two weeks in each year. The length of recesses between studies is not designated in the various decrees emanating from the central authorities.

Holidays and vacations.—These are not especially designated, but according to an imperial ordinance of 1886, the year in which a general revision of school affairs took place, the elementary schools were to be closed each year for about eight weeks, also on Sundays, national holidays, and festival days. Elementary schools may also be closed on Saturday afternoons. According to imperial ordinance of 1890 holidays in elementary schools must not exceed ninety days per annum, exclusive of Sundays, but this does not apply to apprentices' schools, supplementary schools for technical instruction, and supplementary courses. The vacations in the university comprise two weeks at Christmas, the first week in April, and two months' summer vacation. Lectures are also suspended on Sundays and on the holidays of September 22, October 17, November 23, January 30, February 11, and March 20.

Compulsory attendance.—The department of education has, by means of regulations for compulsory attendance, so directed the local authorities (Chiji of Fu or Ken) that they fully comprehend the class of rules necessary to render instruction obligatory. For elementary schools the course required is between three and eight years, with no less than thirty-two weeks' school session annually. The parents are obliged to have their children (between 6 and 14 years of age) attend school during such a period, unless they may have some contagious disease, may neither have been vaccinated nor had the smallpox. Under such conditions the parents and local committees, acting in concert, may make other arrangements for the education of such children.

School supply.—Charts, blackboards, the abacus, apparatus required for special studies, the best text-books (translations or otherwise), all are considered prerequisites to education. The schoolbooks and charts are selected by a committee for the examination of schoolbooks and charts. They are subject to the approval of the Fu Chiji or Ken Chiji, and must be chosen from among those approved by the minister of education. The regulations governing school organizations have been in years past subject to the revision which has followed all other sections of education, but the tendencies here, as well as elsewhere, are toward gradual improvement and the adoption of the best plans found in other countries.

SUPPLEMENTARY INSTITUTIONS.

Libraries and Museums, which greatly facilitate educational work, are found in various divisions of the the Empire. No public library, as such, had been established before 1868, but many books had been collected for the use of pupils in the schools established by the Tokugawa Government and by the various Han (territories of feudal lords). The revolution, which did away with the rule of the Shōgunate and brought Japan again under the Mikados, was also the means of bringing these books together in one common center in Tokio, where they were placed in the library of the university and in the Tokio library.

The latter, established in 1872, is the only one to allow free access to the public. This library had, together with other educational institutions, to suffer material changes from year to year, but, in 1890, its shelves held 18,739 Japanese and Chinese books, and 17,455 European books, to which the public had free access. The library has also about 156,902 books which are not placed before the public. The number of visitors was 36,113; the number of books read 247,328. The library of the Imperial University contains 14,357 Japanese and Chinese works, and 54,387 European books, many of which were transferred from the Engineering College. An average of 70 people visited the university library each day. Under the control of Fus and Kens are also 8 public libraries and 10 private ones, with a total of 74,440 books. About 36,341 of these books are found in the local libraries of Tokio. In all these libraries there is a noticeable lack of catalogues, so that the public often fails to realize the value of the books on account of impossibility of access to them.

The Tokio Educational Museum, which was at first called the Office of Productions, takes the first rank among museums. A local museum at Shimane is considered the next best museum on a small scale. In 1880 the Tokio Museum authorities set aside a special room for educators who desired to make a study of the various articles exhibited, so that they might write upon the subject; in 1881 a catalogue was published; in 1884 learned men gave lectures to teachers of Tokio and the neighboring Ken, using the articles in the museum to illustrate such lectures; in 1885 the museum contained 4,815 articles for educational purposes, 8,485 zoölogical specimens, together with 908 articles arranged in a special room. The visitors in that year were 112,900, and the expenditure for that and the Tokio library was 35,131 yen.

Societies.—Educational societies were organized in most of the Fus and Kens in 1876 and 1877, and, about 1880, many private educational societies were founded. Many of these societies are designed to promote education in the jurisdictions of the Fu and Ken wherein established, and some of them contain over a thousand members. The Tokio Educational Society of 700 members is composed of directors and teachers of public and private elementary schools, or persons

otherwise interested in education. In addition to its ordinary transactions it has held competitive educational exhibitions, established institutes for training elementary school or kindergarten teachers, and in other ways aided in educational progress.

Among the most flourishing societies is the private Educational Society of Japan, which has 3,733 members and has established four branch societies in different parts of the country. Since its establishment its members have been sent to various districts to deliver addresses and lectures and to awaken discussions on educational subjects. It publishes a monthly educational magazine and has published educational books, and conferred educational medals on those persons whom the members desired to reward for meritorious work or to encourage continuance of some special work undertaken. Its library consisted of 36,000 Japanese and Chinese books in 1890. Before proceeding to enumerate a few of the 700 societies with their 100,000 members, it may be well to state that the Tokio Private Educational Society held an interesting exhibition throughout an eighteen days' period which was in itself an education. The exhibition contained drawings of the sites and buildings of all elementary schools of Tokio, exhibits by pupils and teachers. In the collections were 314 articles which received honorable mention. Other Kens followed Tokio's example, the private educational societies taking the lead each time. The exhibit at Sogo had over 5,000 articles, and received 391 awards. In addition to these societies and exhibits for the advancement of education there were published, between 1873 and 1884, department bulletins containing accounts of educational progress in Japan and other countries. In the year 1884 the Department of Education ceased to publish such bulletins, but since 1879 private individuals and local school officers have carried on a similar work.

The following are the principal societies which serve as instrumentalities of thought: Dai-Nippon-Kiôiku-Kwai (Educational Society of Japan); Tôkiô-Fu-Kiôiku-Dan-Kwai (Tokio-Fu Educational Society); Chiba-Ken-Kiôiku-Kwai (Chiba-Ken Educational Society); Saitama-Ken-Shiritsu-Kiôiku-Kwai (Saitama-Ken Private Educational Society); Nûgata-Ken-Kiôiku-Gikwai (Nûgata-Ken Educational Society).

The object of these societies is the improvement of education and of the methods of instruction in the respective localities.

Then follow the Djishin-Gaku-Kwai (Seismological Society) which investigates the phenomena of earthquakes and volcanoes; Senkô-Gakusha (Society of Specialities), to study and inquire into various special branches of science; Butsuri-Gakkwai (Society of Physics), which has in view the exclusive study of the higher course of physics; Tôkiô-Sangaku-Kwaisha (Tokio Mathematical Society), which discusses the theory of higher mathematics and translates and compiles works on mathematics; Tôkiô-Futsubun-Kwai (Tokio French Language Society). This society is composed of scholars, both Japanese and

foreign, who are familiar with the French language, and who meet to promote study in the sciences and arts, and to encourage the study of the French language by the interchange of knowledge among the members.

Then there are the Tōkiō-Seibutsu-Gakkwai (Tōkiō Biological Society), for the study of biology in general; Rigaku-Kiōkwai (Society of Physics), composed of professional students who meet for the purpose of inquiring into the principles of physics and of interchanging knowledge among the members; Nippon-Kōdōkwai (Japanese Society of Moral Science), which interprets the principles of moral science; Butsurigaku-Yakujikwai (Society for establishing a regular terminology for physics); Doitsugaku-Kiōkwai (German Language Society), whose object is to study in the German language laws, politics, and other sciences; Tetsugaku-Kwai, Philosophical Society, in which the philosophy of Europe and Asia is studied; Hō-gaku-Kiōkwai (Society for studying law); Tōkiō-Kwagakuwai and Yakugokwai (Chemical Society), for the study of chemistry and the establishing a regular terminology for that science); Kōgakukwai, which aims to study any matters concerning engineering; Bungaku-Kwai (Society of Letters); its object to inquire into politics, political economy, philosophy, and all the branches of Japanese and Chinese Literature; Kanano-Kwai (Society of Japanese Literature), its object to study the etymology and syntax of the Japanese language, and also to teach the construction of common sentences with Japanese characters i-ro-ha; Ri-i-gaku Kōdankwai (Society of Physics and Medicine), which teaches the principles of physics and medicine, and seeks to diffuse such knowledge among the public; Indo-tetsugaku-inmiogaku Kōgikwai (Society of Hindoo Philosophy, and Inmiogaku, a kind of philosophy); Dai-nippon-Shiritsu-Yeiseikwai (Japanese Private Society of Hygiene), which interprets the laws of public health and diffuses knowledge of sanitary matters; Tōkiō-igaku-kwai (Tōkiō Medical Society); Dai-nipponi-yak-uhō-Kwai (Society for the diffusion of knowledge concerning Pharmacy); Shibungaku-Kwai (Literary Society), its object to interpret moral principles, to encourage good customs, to promote literature, to educate youth, to diffuse knowledge, and to cultivate the moral nature; Dai-nippon-nōkwai (Agricultural Society of Japan); Riūchi-Kwai (Society of Fine Arts), its object to inquire into all the fine arts, to improve and advance Japanese fine arts, and to preserve art specimens; Dai-nippon-seisan-kwai (Japanese Marine Product Society), which has as object to investigate marine products in general and to multiply and improve them by interchanging knowledge among the members.

The Asiatic Society of Japan, in its able reviews, treats of most abstruse subjects. Included in its publications are "Notes on Japanese Schools of Philosophy," by T. Hoga; "Comments on Shushi's Philosophy," by T. Hoga and Rev. Geo. Wm. Knox; "Materials for the Study of Private Law in Old Japan," by J. H. Wigmore, and other able educational articles which serve to show the trend of modern ideas.

The Romaji Kai, or Roman Alphabet Association, aims to introduce the use of the Roman letters, instead of Chinese ideographs, in writing the Japanese language.

In 1879 the Department of Education organized the Tokio Academy, which had as object the grouping together of learned men to discuss subjects relating to arts and sciences especially as they appertain to educational matters, or to the advancement of civilization generally. The membership was limited to fifty, afterwards to forty. The approval of the Minister of Education was required before any person could become a member. At the close of 1890 125 meetings had been held and the twelfth volume of their magazine had been published.

Special classes.—The earliest education of the blind and deaf and dumb consisted in merely teaching the former acupuncture, shampooing, and music, and the latter some manual occupations, the effort being to help the defective classes so that they could earn a livelihood. The Kioto Blind and Dumb Institute was first established by private individuals in Kioto in 1828; in 1879 it was transferred to the authorities of the Fu. The course of study extended over five years, but an additional year, called the preparatory course for special branches, was added for the purpose of helping the pupils to gain knowledge of some industrial pursuit. In 1884 the course of study was divided into general and special, the former extending over six years, the latter over five years. In the general course the blind studied "the three Rs," geography, history, object teaching, morals, natural history, training of the senses of touch, smell, and hearing, physics, sewing, gymnastics, and singing; in the special course they had instruction in music and acupuncture. The deaf and dumb had in their general course morals, articulation, "the three Rs," geography, history, drawing, object teaching, natural history, physics, sewing, and gymnastics; special course, drawing (Japanese and foreign), writing, cutting, forging, making gold lacquered pictures, joinery with Chinese wood and with Japanese wood, sewing, embroidery, and thread work. There is not always strict adherence to the course, and supplementary subjects may be allowed in both of these courses if it is thought advisable. Candidates for admission to the institute must be between 6 and 30 years of age, although that limit is sometimes extended to 40 years.

Pupils who are not natives of Kioto pay a tuition fee of 30 sen (about 30 cents) each month. Poor people have loans granted them and are also allowed privileges as regards the difficult courses.

Another institute, the Osaka Model Blind and Dumb Institute, had a similar course, both in length and subjects. The Philanthropic Society of Tokio founded an institute for the blind in 1880, which also admitted the deaf and dumb. In 1886 this institute came under the control of the department of education, and its course was arranged according to the following plan: There were two sections—the ordinary and mechanical. The blind were taught the Japanese language, arithmetic,

conversation, and gymnastics in the former, music and shampooing in the latter. The deaf and dumb had (in the ordinary section) articulation, reading, writing, composition, arithmetic, written conversation, and gymnastics; in the mechanical section drawing, fitting and cutting, and sewing. The age of admission is between 8 and 18 years. Tuition fees were 50 yen (about 50 cents) a month, which were remitted in case of poverty. In 1890 there were 12 teachers in the Tokio Institute, 18 male and 5 female blind pupils, 33 male and 15 female dumb pupils. There were 6,764.858 yen expended for new buildings and 3,068.047 yen for other purposes.

An interesting description of the attitude of the Japanese towards the blind was read before the Asiatic Society of Japan by Prof. Dixon. A résumé of this paper is here presented, as it indicates the thoroughness of the training given to that class:

The blind, in the earlier period of Japanese history, were considered uncanny and unlucky, and they were miserably taken care of until a blind imperial prince was born. The Mikado gathered other blind people around the prince for his amusement, and later, when the prince became governor of three provinces, he selected blind men for his aids in governing those territorial possessions. For three centuries these provinces were ruled by the blind. The practice of shaving the heads of the blind is traced to the reign of this prince. In the twelfth and thirteenth centuries the blind were again sent forth into their former misery. But the wheel of fortune brought about a revulsion of feeling towards this class, and local authorities were ordered to provide for the blind of their districts and to give them suitable education. The blind followed two occupations—music and chanting and shampooing or massage—those who were experts in musical matters ranking well amongst the people, the less expert becoming musical story-tellers. Most towns and villages have their shampooers, who promenade at nightfall uttering a call indicative of their profession. To become a good shampooer requires nine years' practice. The first three years the would-be shampooer practices on his master; then gives three years to acupuncture; then there were three years' probation, the master receiving half the earnings.

The higher grades of offices were at one time open to the blind. Persons holding such positions were provided with special insignia of their office. Among the blind who have made their mark in the Japanese Empire is to be found a famous author, who compiled a valuable work of information in 635 volumes. In other fields of usefulness the blind are sometimes found; but as shampooers and musicians they seem best known.

Miscellaneous and special schools.—Additional to the regular schools embraced in the school system of Japan there is a large class of so-called miscellaneous and special schools, many of which have courses of study of a quite elementary character, while others have, as their names will indicate, special courses in different lines. Many of these schools are under the control of the various departments. In the law of education of 1872 all higher schools taught by foreign teachers were designated as special schools. In 1873, the Tokio foreign language school was established and French courses were introduced, and German, Russian, and Chinese languages were taken up in turn. Eight schools were soon thereafter established as a development from this

school, but these were eventually abolished, and the German, French (1885), and English (1879) sections of the Tokio school became a part of the preparatory department of Tokio university. In 1880 a Korean section was added to the Tokio foreign language school, as intercourse with that country became greater through the treaties of that date. The increased extent of commercial affairs plainly indicated to the Japanese nation the necessity of establishing commercial schools, and at the present time the Tokio commercial school has absorbed the remaining foreign language schools. Classed under special schools are local, commercial, medical, pharmaceutical, and agricultural schools; *i. e.*, 1 medical, 1 commercial, and 1 drawing school in the Fu of Kioto; 1 medical, 1 agricultural, and 1 commercial school in the Fu of Osaka; 1 medical and 1 commercial school in the Ken of Aichi; 1 agricultural and 1 commercial school in the Ken of Yamaguchi; 1 veterinary and 1 commercial school in the Ken of Nagasaki; 1 commercial school each in the Hokkaidô and in the Ken of Kanagawa, Hyogo, and Shiga; 1 agricultural school each in the Ken of Niigata, Miyagi, Ishikawa, Tottori, and Kochi; and 1 veterinary school each in the Ken of Iwate and Ehime. In the Fu of Kioto there are 28 special schools giving instruction in law, medicine, engineering, political economy, philosophy, mathematics, surveying, and drawing; and in the Ken of Aomori, 1 school of literature, and in the Ken of Miye 1 nautical school.

The Tokio commercial school (commercial schools date from 1875) was formed by the union of the commercial and foreign language schools of Tokio, and was placed under the department of education in 1885. A year later an apprentices' institute and a special institute for banking were established in connection with the Tokio school, and the regulations indicated that the Tokio commercial school was "to prepare persons for the management of either public or private commercial affairs, or as managers of, or instructors in commercial schools." The course of instruction is twofold, an ordinary course of three years and a higher one of two years. Candidates for admission must be over 16 years of age and pass an examination in designated branches. Post graduate and elective courses are allowed. The apprentices' institute is designed to teach "such literary and manual work as is necessary for apprentices and artisans, or the children of the same." The courses are two, industrial and special, later called preparatory and principal. For admission to the first the children must be over 12 years of age; to the special course over 14 years; and must be able to pass an entrance examination. The banking or accountants' course aims to give such knowledge "as is deemed necessary for the transaction of financial business in Government departments, banks, companies, etc." The course of study extends over two years, and candidates for admission must be between 17 and 30 years of age, and be able to pass the requisite examination.

The Tokio Technological School, established in 1881, was classed among the special schools until its annexation to the Imperial University in 1886. There are also a few provisional technical schools, but their standard is not high enough to class them among special schools. The Tokio Fine Art School, established as a branch of the Engineering Art School in 1876, and reorganized in 1887, has not as yet developed to any great extent. The Tokio Music School dates from 1884, and includes in its four-year course of study morals, singing, theory and history of music, methods of instruction, use of various musical instruments. A special school in the Ken of Ishikawa has a four years' course, two of them being preparatory years to the courses in either law, science, or literature. Five private schools in Tokio are under the supervision of the president of the Imperial University, who exercises such prerogative through a "committee selected from among the officers of the college of law as inspectors of schools either during the ordinary course of work or at examinations."

The miscellaneous schools are those whose regulations and courses of study do not correspond to either elementary, secondary, or special schools. They include 814 schools for the study of Japanese and Chinese literature, 139 for the English language, 134 for handiwork, 120 writing schools, and 89 for mathematical study. Included under this head is the gymnastic institution, established in 1878, and attached to the Tokio Normal School in 1885. Its special object is to train teachers in military and ordinary gymnastics. Then there is the German language school, established in 1883 by the German Language Association. Its five years' course includes German, English, and Latin languages, Japanese and Chinese literature, natural history, physics, history, geography, chemistry, and mathematics, ethics, drawing, and gymnastics. Politics and law are also taught in a three years' course. The number of these schools is 1,440. The greatest increase of late years is in the English language schools. German language schools and those for mathematics rank next. The schools for instruction in writing are decreasing in number.

SCHOOLS UNDER CONTROL OF OTHER DEPARTMENTS.

The greater proportion of the schools which have been referred to throughout this statement are those which were under the control of the Department of Education, but this essay would be incomplete without a description of such as have been established by, or are under the special supervision of, other government departments. The first mentioned, the Gakushiu-in, established in 1875, was placed under the special control of the Department of the Imperial Household in 1884. The school was originally intended for the exclusive purpose of educating the nobility, but other classes are now admitted according to circumstances. The course of study is of six years preparatory, five years lower grade secondary course, two years higher secondary course, and

three years in a general course. A female school for the education of daughters of the nobility, which until 1885 was a part of the Gakushuin-in, is now under the patronage of the Empress. The elementary and secondary courses extend over six years each, and instruction is given in such sciences and arts as are appropriate.

Under control of the Military Department is the Military College, established in 1882, for the training of infantry, cavalry, artillery, and engineer officers, who are selected on account of talents and distinguished literary attainments. The course of study is of three years, and includes tactics, artillery practice, engineering, field fortification, horsemanship, military topography, topographical drawing, military geography, staff service, military administration and legislation, mathematics, drawing, foreign languages, literature, etc. The students admitted are lieutenants and sublieutenants of infantry and cavalry of not less than two years' service, and the same rank of artillery and engineer officers of not less than one year's service. The military academy is designed "to give instruction in such sciences and arts as are necessary to prepare students as officers of the army." The subjects of study are tactics, artillery, engineering, history, geography, drawing, mathematics, physical and chemical science, foreign languages, and Chinese literature. The military cadet course covers three years; military students of infantry, and cavalry, three years; for artillery and engineering five years, with a provision that students of artillery and engineering, "are to be appointed sublieutenants after two years' study, and allowed to continue their study in the academy with the rank of student sublieutenants." Nearly five thousand students have been admitted since 1870 and 1,652 have graduated. The Toyama Military School, founded in 1873, aims to train instructors, from among the commissioned and noncommissioned infantry officers, to investigate the condition of foreign military methods; to make practical experiments in manual drill, manœuvres, and other military arts; and to investigate the physical and normal condition of officers and privates. The Military School of Gunnery, which in a four months' term instructs in the handling and firing of artillery, was first established in 1886. The Military Department has had since 1871 a "corps of instruction" under its control for the training of persons desiring to be commissioned and noncommissioned officers of the army. The candidates must be between 18 and 25 years of age, of sound constitution, of a specified height, and must pass an entrance examination, and, if trumpeters, must have regular teeth. Over 15,000 students have been admitted to this corps and nearly 10,000 have graduated.

The Department of the Marine controls the Naval Academy, with its four years' course in naval tactics, navigation, torpedoes, ordnance exercises, and general subjects. Candidates for admission must be between 15 and 20 years of age, of sound constitution, and able to pass an entrance examination in punctuation and in composition in

the Chinese language, arithmetic and algebra, English and Japanese translations, English dictation, grammar, and conversation. The Naval Engineering College, separated from the Naval Academy in 1881, trains engineer officers, [called cadet engineers in the United States], and also trains in the higher branches of the science. The limit of age for candidates is 16 to 20; the course one of five years. Then there are the Naval Medical College and the Naval Paymaster's school, the titles easily indicating the class of instruction given. The five years' course of study for physicians and surgeons include zoölogy, botany, practical chemistry and histology, materia medica, pathology, obstetrics, surgery, opthamology, diseases of women, hygiene, medical jurisprudence, surgical practice, physics, anatomy, physiology, health and sanitation in camp life. The paymasters' course is of three years in Japanese and Chinese literature, mathematics, political economy, bookkeeping, and law. Candidates for admission must be between 18 and 20 years of age.

The Department of Justice has connected with it a law school dating from 1876. Those desiring admission must pass the examination in Chinese classics and history. The course of study, which extends from two to four years, includes French and Japanese laws and laws of the moot court.

The Department of Agriculture and Commerce controls the Tokio Agricultural and Forestry College, which, in a modified form, dates from 1874. It was first a school of agriculture; then in 1882 a school for the special science of forestry was established. In 1886 these were abolished and the present college was founded. A general preparatory course, three years, leads up to either of the three sections, *i. e.*, agriculture, forestry, and veterinary science. The sectional courses are from two to three years, or even shorter duration, according to circumstances. In order to enter the preparatory course, students must be between 16 and 24 years of age, and must pass an examination in arithmetic, algebra, geometry, Japanese geography and laws, English or German language, composition, and chemistry. The higher courses require similar attainments and the age to be between 18 and 25 years.

The Department of Communications has control of the school of telegraphy and the Tokio Nautical School. Telegraphists have one year's course for adult pupils between 15 and 25 years, and two years for juveniles between 13 and 15 years of age. This school dates from 1873, but a branch school was established at Osaka in 1882. Entrance examinations are required in English, French, Japanese, and Chinese literature; the subjects taught are telegraphy, English, French, mathematics, and electricity. The nautical school is designed to train for the merchantmarine and naval reserves. It dates from 1875 and was organized as a Government school in 1882 with a course of five years in navigation and engineering. Candidates for the course in navigation are required to be between 14 and 15½ years of age; for the engineering course between

15 and 20 years. The entrance examination to both includes English, Japanese, and Chinese literature and composition; also mathematics.

The Hokkaidô Administration Board has control, since 1886, of the Sapporo Agricultural College. The school dates from 1872, and in its present form has courses in theoretical and practical agriculture, and in civil engineering. A preparatory course of four years requires the candidate for admission to be over 13 years of age and to pass an examination in the elements of the English language, Chinese literature, and arithmetic. For permission to become students of the special course, the candidates must be above 17 years and have passed through the preparatory course, or have passed an examination in the English language, English and Japanese translations, Chinese literature, geography, history, natural history, physical geography, physiology, elements of chemistry, and mathematics. Post-graduate courses, from one to three years, are allowed to students at expense of the school, if they possess unusual attainments. There is also a two years' course in practical agriculture with a model farm attached.

PRESENT CONDITION AND FUTURE POSSIBILITIES.

At the commencement of this essay reference was made to the probable changes which would arise from the establishment of the new constitution. According to the views of several writers who seem cognizant of educational and other affairs, the future of education in Japan is not painted in the most glowing colors. The newly established Parliament is endeavoring to institute economies, and among other things public instruction loses at least one-half of the \$800,000 fund proposed by the Government. Five years ago (about 1887) five higher schools for secondary instruction were created in different places throughout the Empire by Viscount Mori. These schools were to be the beginning of future universities. Of these training academies the one at Sendai, a city of 70,000 inhabitants north of Tokio, commenced its class work in 1889, but the buildings were not completed nor did the formal dedication take place until the latter part of 1891. Great preparations for this event were made. Teachers of the surrounding country, the higher officials of the department of education (the *Mombushô*, as it is called), and prominent citizens took part in the ceremonies, which were preceded by the conferring of diplomas on graduates of the medical department. The decrease in the budget tends to do away with these institutions; the reformers object to so much state control of education; students refuse to be taught by foreigners, and a general conservative movement in education is noticeable. Among the tendencies manifest of late years are these: "The rising generation is growing up without those habits of instinctive obedience and reverence which characterized the previous civilization;" "The question of how to preserve sound morality and discipline in the schools is causing grave concern at headquarters, *i. e.*, among the prominent officials who have

education in charge." As the Japanese truly say, "the common-school idea is to civilize the whole people of the Empire; consequently morality should be cultivated, as that is the basis of all education." The demand for foreign teachers grows less and less from year to year, as students prefer the Japanese, who more thoroughly understand their customs and who are of more assistance to them in making translations and other literary work.

The present status of affairs, with the tendencies toward still further revision of education, may be gleaned from the following statement of a resident of Japan:

The ranks of the foreign instructors in the Imperial University have been seriously thinned, and their places are being filled by young graduates of promise, and the process has included even the representatives of German science, which has of late been in the highest favor. Parliament has questioned the policy of educating students abroad at the expense of the State, and it is likely that the number of these students will be gradually reduced. The students who are taught here in foreign languages are not found to be so ardent as in former days in the acquisition of the foreign tongue, and the task of conveying such instruction has become correspondingly difficult. In the matter of laws, too, the postponement by Parliament of the operation of the Commercial Code until 1893 is significant. It is a close adaptation of the German code, and its repugnance to the customs of the country is one of the strong points with its opponents. Parliament is very anxious, too, to know whether it is necessary to maintain so many foreign advisers and superintendents in the Government departments, and the ministry is placed always in an attitude of defense and explanation, not to say apology. In religion,¹ too, the reactionary movement is strong.

In contradistinction to these statements made by persons resident in Japan, it may be said that the Japanese have long followed the progressive movements of European and American countries, and that they have endeavored in every way to develop instruction. The exhibits made at the different international exhibitions have shown a high standard of excellence, and even the publications by the Japanese of work done in the English, French, and German languages were remarkably correct. A cursory glance at their educational journals shows that many modern movements are under discussion, and that the retrograde movements are directly counterbalanced by other efforts toward even higher advancement. In all matters appertaining to the education of children the efforts have been most noticeable. The Japanese teacher, who must be of a high moral character himself, acts as a sort of guardian for those under his guidance, and if the pupils act badly outside of the school room the teacher is considered at fault.

A foreigner writing for the Journal of the Japanese Educational Society (described under Supplementary Institutions) suggests to the Japanese people the establishing of vacation colonies for poor children, such as are so successfully carried out in Germany, Spain, Switzerland, and elsewhere.

¹ By the new constitution absolute freedom of religious belief and practice is secured, so long as it is not prejudicial to peace and order. There is no State religion and no State support.

Still another number of the Journal discusses the movements of a woman's educational society, which, numbering 120 members in 1887, has as its object the promoting of woman's education. The society had already displayed its interest in the subjects of hygiene, equal rights of men and women, and it, with other organizations, was manifestly developing all movements which tend toward the higher education of woman.

The training of women in Japan has now become a noticeable feature. In the Ken of Nagana a school has been established for the purpose of training women "to take charge of and amuse young children while their mothers are at work." In 1891 there were 74 pupils. Arrangements have also been made to "employ women in the Imperial Post and Telegraph Offices" and "to place them on an equal footing with other employés." The "women who are taking the lead in these movements are the Samurai class—*i. e.*, those who belong to military circles." They are endeavoring "to establish upon a broader and surer foundation the position of women in their own country." They are "eagerly working into the positions of teachers, interpreters, trained nurses, and other places which naturally open to women."

The propriety of having preparatory commercial and technical instruction in elementary grades, so that the pupils might be better fitted to enter the regular technical schools, was discussed in 1890. In 1892, in discussing the possible establishment of apprentice schools, the needs of localities were to be taken into consideration. In some districts spinners are needed, in others stonemasons, in other localities still other industries were most needed.

A new development in the scientific line, the Harris School of Science, which was regularly opened on April 7, 1891, is observed in connection with the Doshisha Preparatory, Collegiate, Theological, Scientific, and Politico-Law schools at Kyoto. The gift of Mr. J. N. Harris, of New London, who gave \$100,000 for such purpose, its aim is to "offer a post-graduate course to such students of the collegiate department as may desire to pursue advanced studies in science and its application to the arts."

The Doshisha school was founded in 1875; girls' school added in 1877. The preparatory has a two years' course; the collegiate, four years. The collegiate division has (1) a literary, historical, and political course; (2) a scientific and mathematical course. Then there is a regular theological course and a school of political science and law. The intention is to develop this school into a university under Christian influences.

While the growth of education has been truly marvelous in this far-off eastern empire, especially during the last twenty-five years, yet may it be said that the characteristic effort "to combine in one system the board schools of England, the high schools of America, the normal schools of France, and the universities of Germany" has naturally

made the task a difficult one, and the "history of the department of education shows constant countermarching by which the goal has been brought nearer and nearer."¹ "Boards and departments and offices were created and abolished; codes were formulated and repealed; individuals were appointed and dismissed." But with all "the Japanese educational system exhibits two out of the three great principles of national instruction: it is compulsory and secular, but not gratuitous," Notwithstanding that education is compulsory, in the country districts the simpler elementary course is a comparatively short one, because the country people are poor and unable to pay for longer terms. "The weak point in the maintenance of such elementary and middle schools, besides the changes to which they have been subjected, is that they are subject to the success of the crops, as the amount of local taxation must be dependent, among a poor agricultural people, upon their yearly prosperity." Great hopes are based upon the normal schools, as the Japanese realize thoroughly the need of well-trained teachers for the lower grade schools. They say truly that it is "a broadening of the base of education that Japan needs most; among a people so intelligent and so ambitious there will never be any lack of polishing at the apex;" hence the life in the university, with its students "engaged in independent investigation of abstruse questions in medicine, chemistry, and physics," will make its impress felt by degrees in Japan and elsewhere, as its students continue to spend years of study in other countries and bring back such elements of Western civilization as are most needed to carry out the ideas of the statesmen of Japan.

The spirit of Japanese education was thus summed up by His Excellency Count Mori just prior to his assassination. It forms a fitting termination to this essay on the educational system. He says:

It is our aim to inculcate and develop three qualities in our people: obedience, sympathy, and dignity²—obedience, because only through obedience come regularity and serenity of life. Our people are irregular at present, and the influence of our rebellion ten years ago has been widespread in making them so; therefore obedience ranks first among the qualities they need. Sympathy we must inculcate, because it is the crowning virtue of civilization and the indispensable basis of the democracy which we, like other nations, hope to become. Our people have emerged too recently from feudalism to possess sympathy in any great degree, and without sympathy the best man is but a savage. Finally, dignity is the handle of all the blades of character. The Japanese are an impulsive people, and now that they are about to meet the outside world on equal terms for the first time the value of dignity can not be overestimated. These three, again, are the characteristics of an ideal army, invariable obedience, perfect sympathy of high with low and low with high, equal dignity in victory and in defeat. To aid in their development, therefore, we have established military drill in our schools.

Such is the self-imposed task of the Japanese in their efforts to educate the nation, and the results are especially noteworthy, for this people has adopted the best developments of the Western Hemisphere,

¹ The Real Japan, by Henry Norman, pp. 89-106.

² *Ibid.*, pp. 103, 104.

and has overcome almost insurmountable difficulties in devising and developing an eclectic system. Foreign influences are felt in reflex action, but it is said that "in five years' time there will hardly be a position¹ involving high practical scientific knowledge filled by a foreigner—the architects, the naval architects, the engineers, the mining and railway and sanitary engineers, the chemical and agricultural experts, the physicians and surgeons, the assayers and masters of the mint—all will be graduates of the Tokei Daigakko, or Imperial University." This is a clear picture of the Japan of the period. The discussions in regard to a narrowing of the educational budget, the changes involved in the establishment of a new constitution will all cause certain modifications of the present status, but the natural tendencies of the Japanese people signify onward movements in every line where the nation's weal is taken into consideration, and the future will bring still other developments as marked in their way as have been those of the past.

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¹ The Real Japan, by Henry Norman, p. 105.



CHAPTER X.

EDUCATION IN ITALY.¹

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The object of this essay is to indicate the tendency of modern Italy toward high special studies. But before exhibiting, by analytical tables, the standing of the Italian nation in those intellectual departments in which she has already attained a prominent position, it seems advisable to give an introductory statement as to the condition of her primary, secondary, and industrial schools, according to the most recent statistics.

This essay includes a statistical review of the following subjects:

- I. Illiteracy: Causes, percentages.
- II. Kindergärten and their development.
- III. Popular Primary Education: Schools, whether public, night, Sunday, military, industrial, normal; their progress since the enactment of the law for compulsory education (1877).
- IV. Secondary: Inferior and superior "ginnasi" and "licei;" technical schools and technical institutes; naval, agricultural, industrial, and normal schools; reform of secondary instruction.
- V. Superior and Special Instruction: Universities; their programmes and their pending reform; superior institutes, superior special schools, academies, and special academic institutes.
- VI. Fine Arts: Academies, institutes, museums, antiquities, and national monuments.
- VII. Libraries: Governmental, university, provincial, municipal, etc.
- VIII. Press: Newspapers; magazines; books.
- IX. Budget of public instruction.
- X. Scholastic, general, provincial, and municipal administration.

I.—ILLITERACY.

The following figures, representing the degree of illiteracy of the Italian people, notwithstanding the law for compulsory education (1877), show that, in order to wipe out illiteracy from her soil, Italy has still to contend with serious problems.

¹ Supplementary to "The School System of Italy," in the Report of the Commissioner of Education for 1888-89, pp. 182-195.

Percentage of illiterates to 100 inhabitants.

Census.	All ages.	From 12 to 20 years of age.
1861.....	78.06	71.45
1871.....	72.95	63.53
1881.....	67.26	54.30
1891.....	55.00	42.00

Percentage to marriages.

In 1891, of 66,658 marriages registered in the chief provincial districts, 28.08 per cent of the "contracting parties" were unable to read and undersign the legal act.

Proportion of illiteracy at the time of marriage, by regions.

Northern Italy:	
Turin.....	5.06
Milan.....	6.04
Average.....	5.50
Central Italy:	
Florence.....	14.08
Rome.....	18.02
Average.....	16.05
Southern Italy:	
Naples.....	36.01
Catanzaro.....	63.04
Average.....	49.52

A generation ago 78 per cent of the Italian population could not read or write. Since then education has reduced illiteracy to 50 per cent of the whole population, 42 per cent of persons from 12 to 20 years of age, and 28.08 per cent of those contracting marriage. Yet this gain is not considered sufficient by those who insist that intelligence and education are indispensable attributes of national pride, popular prosperity, and human civilization.

As the ignorant man in the struggle for existence has no chance against his learned competitor, so popular illiteracy robs a nation of moral energy and condemns her to be the victim and the slave of those who possess greater intellectual force. This has been felt in Italy by all patriotic citizens, and education, therefore, has been a subject of legislation ever since the unification of the country was completed in Rome twenty years ago. The evil was, however, too deeply rooted to be cured within one generation. The main causes of this deplorable state of public education in Italy, as it was revealed by the first census (1861), must be sought in the following historical facts:

First, the foreign invasions, which for so many centuries not only subjugated, but kept the country divided against itself and denationalized even its literature and instruction.

Second, in the religious superstition which for a long time dominated the masses—a consideration that finds its unmistakable proof in

the proportional average number of illiterates existing (in 1872) in Piedmont, where foreign domination never existed, viz, 15 per cent, and that of Basilicate, Abruzzi, the southern province of Calabria, and Sicily rescued in 1860 from Bourbon Jesuitic rule 90 per cent. It has also been reported, as characteristic of religious influence, that the only spot in Italy where illiteracy did not exist was in the Alpine districts inhabited by the Waldenses, the only Protestant Italian population.

If the flame of Italian genius has not been extinguished by such influences, while popular culture disappeared, it is because of the extraordinary resisting power of the Latin race, which even in the darkest days of its history, between the thirteenth and nineteenth centuries, gave to the world such representatives as Dante Alighieri, Christopher Columbus, Nicolo Machiavelli, Giordano Bruno, Michelangelo Buonarroti, Raffaele Sanzio, Galileo Galilei, Leonardo da Vinci, Amerigo Vespucci, etc. And in more recent times, Galvani, Volta, Beccaria, Torricelli Spalanzani, Rossini, and others; poets, thinkers, navigators, scientists, and artists, whose immortal works and teachings brought Italy to a third life and illumined the paths of humanity.

II.—KINDERGARTEN.

The kindergärten (asili infantili), which were few in number thirty years ago, were after the first census (1861) gradually brought to a successful development, as is shown by the doubling of their number between 1871 (1,099, with 130,806 infants) and 1888-'91 (2,218, with 256,423 infants). The department of education also manifested interest in their special pedagogic and scientific aims:

First, by the introduction of Frœbellian lectures on hygiene, pediatry, and the best methods of practical infant instruction, these lectures to be delivered in the principal centers of population by licensed female teachers and physicians.

Second, by annexing the kindergarten to the royal normal schools as far as the regular inspection, uniform and systematic organization, and the pedagogic preparation of female teachers were concerned (1890).

Third, by national exhibitions of hygiene and methods of infantile instruction (Milan, 1891).

Kindergarten schools.

	1871.	1881.	1888-'91.	Notes.
Public kindergärten	1,099	1,379	1,594	Total kindergärten, 2,218.
Pupils	130,806	191,057	215,941	Total pupils, 256,423, with constant tendency to increase. ^a
Private kindergärten		362	624	
Pupils		27,491	40,482	

^a In 1892 there were 1,618 public kindergärten, with 228,490 pupils, and 602 private kindergärten, with 39,696 pupils; total 2,220, with 268,186 pupils.

III.—POPULAR PRIMARY EDUCATION.

Primary instruction is now imparted in all the communes of Italy (8,253 on the 1st of January, 1892).

It was first made compulsory in 1859, but the law could not be enforced at that time on account of the political agitation during the period of the wars of independence. A new law was enacted in 1877, covering more ground than the former, the enforcement of which has been of marked effect in the general development of popular culture, as is shown in the length of the school term (9 months between 6 and 10 years of age); in the number of pupils; in the attendance and efficiency of teachers, which has kept pace with the general improvement by means of pedagogic lectures and annual conventions.

The spirit of national and popular education is greatly aroused by the parliamentary debates that have recently taken place on the subject, and the subsequent augmentation of the budget of public instruction by the central as well as by the provincial and municipal administrations. The discussions included the creation of a pension fund for the benefit of elementary teachers, and they extended to the benefits which would accrue from the subsidies granted by the Government to communes for the erection of school buildings.

The number of pupils, which in 1871 amounted to 1,722,947, has now increased to 2,326,392 in public elementary day schools only; but including night, Sunday, normal, and military schools, a total of 3,306,266 is obtained for the whole population of Italy. This includes army elementary schools, which are peculiar to the country, the usefulness of which is demonstrated by special statistics. As a result of their organization the illiteracy, which on 100 recruits of both army and navy, averaged formerly 52.78 per cent, had decreased in 1871 to an average of 6.52 per cent, so that 93 per cent were sent home after their military term of service able to read and write. When, owing to reasons of public economy, the regulation was repealed which provided that no recruit could get his discharge unless he could read and write, the percentage of those who had been in school was reduced.

Finally, of the annual contingent of 365,026 recruits, 80.48 per cent are fully able to read and write at the time of their discharge from military service. By law all sergeants leaving the army may receive, if desired, the diploma of an elementary teacher, thus greatly contributing to the increase of the staff for primary popular education.

In the elementary and industrial schools and institutes for deaf, dumb, and blind of Milan, Palermo, Rome, and Turin, as well as all the elementary and industrial schools of prisons, penitentiaries, and houses of correction of Italy, the increase of illiteracy is still larger, as shown by special statistics. (Of 388 illiterates in reformatories, 371 were able to read and write at the end of the year.) In the roll of primary instruction there are also about 50 schools opened in foreign countries,

namely, in the Levant and certain parts of South America, where Italians remain as residents and not as citizens. The Italian Government reserves the right to inspect and to enforce a curriculum of study, contributing in its budget and annual subsidy of one-half million lire.

The programme of studies for elementary schools is as follows: Rights and duties of citizenship, reading, handwriting, rudiments of the Italian language, and history, arithmetic, metric system, gymnastics.

Manual training will be added at an early date to the programme in order to prepare those pupils for common industrial life who do not pursue the higher courses of studies.

The criticism is made, both in and out of Parliament, that the elementary school of Italy is not sufficiently educational to form the character of the pupil, so that he will be fitted to perform whatever duties are assigned him by his compatriots; that too much of his time is taken up by the arid processes of mental exercises to the detriment of the moral aims of education. To that criticism, Hon. E. Villari, ex-minister of public instruction, and one of the most learned and progressive Italians in pedagogical science, answered that the educational character of the people's schools could not be expected to be perfected by means of programmes only, so long as the general progress of the people is slow; that progress must come from every direction in order to give the people's school a higher educational character.

But it is an acknowledged fact to-day that in modern Italy elementary instruction, which only could raise the standard of popular education among the masses, has been from the beginning unwisely sacrificed to secondary instruction. This has been clearly stated by Hon. Gallo in his exhaustive report to the Chamber of Deputies this year. He says: "We went too far when we admitted that secondary instruction could have, as a means of educating the people, the same efficacy as primary education. Italy always needed, and needs yet, a school, complementary to the elementary one, where the minds of the pupils will be formed especially for the aims of life and the defense of national rights. It is the Government's duty to organize a democratic school answering to the needs of the majority of the people, who can not continue their education in the schools for secondary instruction." Thus it seems that the curriculum of primary instruction in Italy has been freely discussed and the suggestion of the complementary school is admitted as a necessary basis of an early reform.

*Elementary instruction.*¹

Number.	1871.	1881.	1888-'91.	Notes.
Public day schools.....	33, 556	42, 510	55, 547	Total schools elementary instruction, 66,450.
Teachers	34, 309	44, 670		
Pupils	1, 545, 760	1, 923, 706	2, 326, 392	Total pupils: 1891..... 2, 593, 395 1871..... 1, 722, 947
				Increase. 870, 448
Private day, regular.....	8, 157	5, 797	7, 975	
Teachers	9, 114	8, 185		
Pupils	177, 157	125, 516	181, 831	Total pupils, elementary instruction: Day 2, 593, 395 Army... 365, 026 Night .. 22, 006 Sunday . 125, 839
				Total. 3, 306, 266
Private day or irregular and sectarian.....		2, 361	2, 908	
Teachers		2, 779		
Pupils		66, 356	85, 172	
Night schools.....	9, 809	6, 295	5, 983	
Teachers		6, 902		
Pupils	375, 947	248, 012	222, 006	Almost all males.
Sunday schools	4, 743	3, 895	4, 380	
Teachers		4, 397		
Pupils	151, 585	122, 207	125, 839	Only one-fifth males.

¹ The "Annuario Statistico," September, 1892, gives later figures as follows: Public schools, 55,547; pupils, 2,357,148. Private schools (regular), 8,157; pupils, 184,404. Private schools (irregular), 2,908; pupils, 85,172. Night schools, 5,191; pupils, 191,600. Sunday schools, 3,625; pupils, 100,150. Total, 2,918,474. This does not include the army schools.

IV.—SECONDARY INSTRUCTION.

Secondary instruction is given in the following classes of schools:

(a) Classical: Ginnasi (inferior and superior); licei.

(b) Technical schools and technical institutes.

(c) Nautical, industrial, agricultural, commercial, and normal schools.

The increased number of technical schools and institutes, and of "ginnasi" and "licei," as well as the increase of pupils, viz, from 43,798 in 1871, to 85,629 in 1890, is considered as a great advance in secondary instruction in Italy. But whether the people derive greater usefulness from classical or technical training is now a particular subject of discussion, the result of which is expected to be in favor of technical instruction. It may be stated as an opinion that while all the Italian ministers of public instruction have understood their mission and demonstrated a desire to fulfill it to the best of their ability with the means put at their disposal, very few of them have emancipated themselves from the Italian preference for classical studies "for the majority of the people," a tendency which is not in harmony with the modern idea of fitting the greatest number for the pursuit of agriculture, commerce, industry, and finance—a field where "arithmetic is the first theoretical study necessary for the mastery over the material world." The evil of fostering classic instruction among the Italian people is proven, first, by the ratio of the number of pupils frequenting "ginnasi" and

"licei" (63,860) to those of technical schools and institutes (21,036), the only secondary instruction preparing pupils for early practical life; second, by the fact that out of the 50,132 pupils of the "ginnasi" 13,728 only enter the "licei," the balance, viz, 36,404, entering the field of life with a preparation of classical studies, when a technical and a professional one would be more to the purpose. The consequence of this is that when the students are brought in contact with the people of other nations, and especially with the Anglo-Saxon, they are frequently found to be deficient in the practical methods that lead to success. So that while the "ginnasi" though crowded with pupils, do not contribute much to the higher and special studies, since the greater number of them (68 per cent) stop at the door of the "licei," agriculture, commerce, industry, and steam power are not attended to as they should be for the increase of national prosperity.

Hon. E. Villari, ex-minister of public instruction, in his analysis of the Italian system of public instruction before the Chamber of Deputies, May, 1891, and in response to the general attack against classical education, closed the debate with the following sentences, characteristic of an Italian mind:

Industrial schools are necessary for the toiler in order that he may be trained to the study of the material world, of which he is a part. But if the people prefer to crowd the "ginnasi," it is because they naturally follow the instincts and traditions of their country. Therefore, it is our duty to raise a generation educated to live in the world of thought. The sciences, and mathematics particularly, however useful they may be in subjugating natural forces to the use of man educate only unilaterally. They do not prepare human intelligence for those problems, the objectiveness of which is thought, while literature and words, holding all that a nation has felt and suffered, direct the pupil toward a world of thought, thus forming that intelligent class which has a high mission in modern times when the working class is on the increase and tending to become one of the most potent forces of human society.

Then, refusing to consider a plan for the general reform of the Italian educational system, which he declared could only be done by slow and continuous movement, the minister proposed what he thought necessary and advisable to adopt in the transformation of technical instruction, namely, the division of existing technical schools into three branches: First, a school of superior elementary instruction; second, a school for commerce and industry; third, a theoretical scientific school for those who wish to enter technical institutes. The first of such new schools to be accessible both to men and women in order to give them an equal chance to complete their elementary instruction for the education of the family and the wants of ordinary life. The second, the industrial, he declared urgent, because the "wealthiest and most powerful nation is the one that creates the most skilled laborer." The third, the theoretical, to fully prepare for the applications of science.

Programmes of study for secondary instruction.

Ginnasi.		Licei (3 years).
Inferior (3 years).	Superior (2 years).	
Italian language.....	Italian language and literature.	Italian literature, "Dantesca" period.
Geography, descriptive and political.	Geography, ancient.....	Geography, mediæval and modern.
French.....	French, German.....	French and literature; German, optional.
Arithmetic.....	Mathematics (arithmetic, rational).	Algebra, geometry, plane trigonometry.
Natural sciences.....	Zoölogy, botany.....	Zoölogy, botany, mineralogy, geology, physics, chemistry (cinematics, statics, dynamics).
Drawing.....	.....	History, mediæval and modern.
Latin.....	Latin.....	Latin and the classics.
Gymnastics.....	Greek.....	Greek and the classics.
		Philosophy, psychology, logic, ethics, mechanics, pneumatics, acoustics, optica, electricity and magnetism.

DIPLOMAS¹ OF SECONDARY CLASSICAL INSTRUCTION.

The diploma of the fifth elementary year is necessary to be admitted to the inferior "ginnasi."

The diploma of the third year inferior "ginnasi" is necessary to be admitted to the superior "ginnasi."

The diploma of the second year superior "ginnasi" is necessary to be admitted to the "licei."

The diploma of the third year "licei" is necessary to be admitted to the "universities."

The diploma of the third year "licei" is necessary to be admitted to the superior special schools.

PROGRAMME OF TECHNICAL SCHOOLS AND INSTITUTES.

Technical School (3 years).—Italian language; geography, descriptive and political; French; arithmetic; geometry; commercial studies, book-keeping, handwriting, natural sciences, drawing.

Technical Institute (2 years).—Physics, mathematics (first section); agronomy (second section); surveying (third section); commercial studies and bookkeeping (fourth section); industrial and technical branches (fifth section).

DIPLOMA FOR SECONDARY TECHNICAL INSTRUCTION.

The diploma of the fifth elementary year is necessary to be admitted to the technical schools.

The diploma of the third technical year of the school is necessary to be admitted to technical institutes.

The diploma of the second institute year (either section) admits to Institute of Forestry, to first course in physics and mathematics, to the university, and for the diploma of civil engineering.

¹ Generally called the "licenza ginnasiale" and the "licenza liceale."

SECONDARY CLASSICAL AND TECHNICAL INSTRUCTION. (a).

	1871.		1881.		1890.		Profes- sors.
	No.	Pupils.	No.	Pupils.	No.	Pupils.	
CLASSICAL.							
Governmental ginnasi.....	104	8,269	113	12,876	154	19,815	.....
Public (b) and private ginnasi	500(?)	20,000(?)	588	28,248	560	31,476	4,309
			701	41,124	714	51,286	.....
Governmental licei.....	79	3,773	83	5,989	108	8,138	.....
Public (b) licei.....	190	4,000(?)	215	9,144	201	5,708	1,824
			298	11,133	309	13,846	.....
TECHNICAL.							
Technical schools.....	62	6,189	63	6,852	161	17,011	.....
Technical schools, private			320	15,268	246	13,825	3,028
			383	22,120	407	30,836	.....
Technical institutes.....	68	4,849	40	4,696	54	5,440	.....
Technical institutes, private.....			39	2,182	21	1,098	1,249
			.....	6,878	75	6,538	.....

a The "Annuario Statistico," dated September, 1892, gives the following as the latest figures: "Ginnasi," 723; pupils, 54,232. "Licei," 315; pupils, 14,003. Total, 68,225. Technical schools, 333; pupils, 32,256. Technical institutes, 73; pupils, 10,283. Total, 42,539. Total for secondary classical technical instruction, 108,764.

b Supported by the communes, by corporations, or by private individuals.

Pupils in the five sections of the technical institutes.

Sections.	Pupils.
Physico-mathematical	1,215
Agronomy	22
Commerce and finance	923
Surveying	740
Industrial	82

MALE AND FEMALE NORMAL SCHOOLS.

There is one special superior normal school at Pisa, and there are 134 normal schools in Italy for males and females, distributed in as many cities. Their object is to prepare teachers for primary elementary instruction.

The position of professor in secondary instruction (technical schools and institutes) is subject to competition among those who can exhibit a diploma of one of the Italian universities, or of a school, institute, or academy for special superior study. This subject will be properly treated under special and superior instruction; but it may be stated that of the total number of the 134 normal schools for both sexes, 26 rank as "inferior" and 108 as "superior;" 36 are for men and 98 for women. According to that proportion, the total number of pupils is divided as follows: Men, 1,414; women, 9,646; making a total for 1890 of 11,060 to 6,130 in 1871, with 1,392 teachers. The progress of normal instruction in Italy may be noted from the above statement.

The fact that women normal pupils amount to about 80 per cent of the total finds its explanation in the unequal treatment of the women

under the old system of public education in Italy. Women have equal access to elementary, day, and Sunday schools. When they wish to perfect their elementary education, the normal school is the only institution to which they can apply for that purpose. The result is that while the normal schools offer to many girl pupils the desired occasion to complete their elementary education, the importance and normal character of the school itself becomes lowered.

In the special parliamentary debates, it was assumed that the only official schools for female normal education were the two special normal institutes or "magisteria" for women in Florence and Rome, and the nine special superior female educational institutes (educatorii) of Florence, Milan, Naples, Palermo, Montagnana, and Verona. Of the 98 regular normal schools in the most populous towns throughout Italy many fill to-day the place of the much-needed complementary school of elementary education. They answer more the purpose of general female culture than that of normal training, for which they were created.

Under such favorable circumstances the culture of Italian women, as noted in the attendance at the normal schools, has progressed everywhere. The pedagogic direction of the kintergärten, of the Sunday schools, as well as of the inferior classes of the elementary schools is now entrusted to female teachers with satisfactory results. Quite lately a group of the most distinguished and well educated women, well known in literature, have undertaken, by means of lectures and the press, to secure such a law as will afford women the same treatment as is accorded to male pupils. Public opinion in Italy is favorably disposed to the idea. "That a sister in a household," according to a recent plea for coeducation, "should be educated as their brother is educated; that the mother should have the power, by reason of her own serious thought on literature, history, art, and the varied ennobling instrumentalities of life, to guide and train the thought power of her children; that the wife should be on an intellectual plane with her husband, ever stimulating and inspiring him by thinking and never giving him opportunity to depreciate, or to seem to depreciate, her mental capacity in comparison with his own."

SPECIAL SUPERIOR NORMAL INSTRUCTION.

Date of foundation.		Professors.	Pupils.
1846.....	Pisa Superior Normal School (male).....	3	5
1882.....	Rome Superior Normal School (female).....	14	64
1882.....	Florence Superior Normal School (female).....	12	115
		29	184

In addition to the above there are six normal literary schools (universities) and five normal scientific schools (universities)—Naples, Padua, Palermo, Pavia, Rome, Turin.

Elementary normal schools.

	Number of schools.	Pupils.
Superior (males).....	108	1, 437
Inferior (females).....	26	10, 257
	134	11, 694

a Later statistics (Annuario Statistico, September, 1892), bring this number to 12,856.

V.—SUPERIOR AND SPECIAL STUDIES.

Persistence in the adoption of that class of studies called superior and special indicates intellectual power in a nation and its inclination toward solving those problems which are of benefit to mankind. It also shows what are the characteristic qualities of nations and the degree of influence they exercise in the progress of human thought. The tendency of a nation toward the highest education, whether in literature, philosophy, or science, can only be measured by looking into her historical tradition, that sacred treasure handed down from one generation of thinkers to another, for every generation adds the products of its own studies and experience to the national intellectual treasure.

Owing to traditional Roman culture Italy could, in the mediæval period of the glorious republics of Genoa, Venice, Amalfi, and Florence, open a new civilization, while many nations had scarcely emerged from barbarism. During the "Rinascimento" she gave to the world philosophers, astronomers, navigators, artists, historians, etc., of immortal fame.

The spirit that animated the celebrated school of Salerno, the classic "Studio of Bologna," and all her traditional schools of art and science, which seemed to be lost during three centuries of national disorganization, are now revived; and the revival is evinced by the elevated programme of studies adopted for the Italian universities and academies, also by the large number of athenæums and superior special schools which have been inaugurated in the principal cities during this generation.

They represent the tradition of the Latin race for high and special culture, and explain at the same time the tendency of modern Italy in that direction. The programme of study of the Italian universities and superior institutes is to-day as high as that of any other European university, and in several branches, such as legal jurisprudence and moral and economic social sciences, Italy holds a prominent place. It is her glory to have adopted, within the generation following her national resurrection, a code in which capital punishment finds no place and where criminality is treated on the scientific basis of pathological sociology. This new conquest of the human mind, connected with biology, anthropology, physiology, and psychology, has in Italy specialists of international reputation, such as Prof. Lombroso and others well known. Sociology is already taught in ten universities and several autonomous Italian academies.

AGRICULTURE.

Agricultural instruction is now being imparted in Italy as follows: In higher elementary schools; in normal schools for males; in ambulatory schools for elementary teachers; and more particularly in 135 institutions founded since 1870, showing the progress made by the country in one generation, viz:

One superior normal school (Pisa); 2 special scientific superior schools (Milan, Portici); 6 academies of agriculture (Turin, Milan, Florence (Georgofili), Fermo, Lecce, and Pesaro); 1 forestry institute (Vallombrosa); 14 agrarian stations; 1 institute for the advancement of agriculture (Naples); 10 special normal schools; 25 farming schools (a law of 1887 ordering the foundation of such schools in each of the sixty-nine provinces of Italy); 75 technical institutes (sections of agriculture and surveying).

At the present day skilled agriculture is recognized in various countries as an element tending to national prosperity.

This has been felt by the Italian nation, and undoubted signs of a revival are already noticeable throughout the country.

The Italian Government, having opened thirteen deposits of agricultural implements for free public use in 1870 (increased to forty-eight in 1890), the importation from England, Germany, the United States, and France of a great amount of machinery was a natural consequence; and furthermore, international exhibitions having served as a precedent, national and local agricultural conventions and exhibitions were annually organized in the most productive districts. Scientific agriculture as taught in the special industrial schools and superior institutes is already productive of national results, in machinery and implements, with a constant tendency to increase, and is expected in time to replace importations.

There are in Italy (1890) about 2,000,000 hectares of uncultivated land good for agricultural purposes, besides the special immense mountain tracts reserved for the pasture of cattle and sheep, and 353,709 hectares (ex-Neapolitan feudal and ademprivi Sardinian lands) destined for agriculture and colonization.

SCHOOLS IN WHICH AGRICULTURE IS TAUGHT.

Date of foundation.		Professors.	Pupils.
1870	Pisa, Superior Agrarian School (University), (1 cabinet chemistry, 1 cabinet cryptogamy, 1 cabinet Agricultural and Rural Economy).....	.....	31
1870	Milan, 1 superior special scientific school.....	11	36
1870	Portici, 1 superior special scientific school.....	15	41
1860	Vallombrosa, 1 forestry institute.....	3	34
1876	10 Special (Viticulture and enology, olive culture and oil; pomology and horticulture; forestry; silviculture; zoötony and caseification).....	47	232
1879	25 Practical:		
	Technical institutes, section of agronomy.....	63	566
	Technical institutes, section of surveying.....	63	762
	Male normal schools.....	63	1,131
		.....	a2,893

a These figures were increased to 4,320 in 1891-'92.

Elsewhere noted: 20 botanic orchards (connected with universities); 6 cabinets of agrarian chemistry; 14 agrarian stations; 6 academies of agriculture (Turin, Milan, Fermo, Florence (Georgofili), Iesi, and Pesaro); 1 institute for the progress of agriculture (Naples).

SUPERIOR SCHOOLS OF COMMERCE.

Date of foundation.		Professors.	Pupils.
1886	Bari, superior school.....	17	69
1884	Genoa, superior school.....	13	41
1863	Venice, superior school.....	13	91
1862	Turin, industrial museum.....	12	81
		45	282

a In 1891-'92 a reduction to 239 is noticed.

INDUSTRIAL AND COMMERCIAL.

	No. of schools.	Professors.	Pupils.
Fine arts, commercial (male).....	53	452	7,063
Fine arts, commercial (female).....	15	201	5,135
Fine arts, industrial (male).....	74	282	7,870
Superior fine arts, industrial (male).....	5	40	1,058
Special fine arts, industrial (male).....	21	175	1,985
	168	1,250	23,111

NAVAL.

Date of foundation.		Professors.	Pupils.	Hearers.	Total pupils.
1881	Leghorn, Royal Naval Academy.....	56	258	.....	.....
1862	Venice, School for Naval Engineers, Mechanicians, and officers of royal navy.	19	202	.....	.....
	SPECIAL NAVAL SCIENTIFIC.	75	460	.....	460
1870	Genoa Superior School.....	17	109	.....	109
1871	21 Naval Mercantile Professional Institutes (2 years study in each branch):				
	12 governmental.....	151	871	69	.....
	9 governmental training courses of study.....	16	14	4	.....
		167	958	.....	958
	Total number of pupils.....			.....	1,527

The diploma of the fourth year of naval studies admits to the second year of the mathematical faculty of universities.

The diploma of the fifth year admits to the first year in the schools of application for civil engineers.

SUPERIOR INSTITUTES OF ENGINEERING AND MATHEMATICS.

Date of foundation.		Professors.	Pupils.
1877	Bologna School of Application for Civil Engineering	26	133
1863	Naples School of Application for Civil Engineering	39	265
1873	Rome School of Application for Civil Engineering	17	105
1859	Turin School of Application for Civil Engineering	9	349
1859	Florence Superior Institute for Practical Studies	66	448
1859	Milan Academy of Sciences and Literature	15	62
1859	Milan Superior Special Technical Institute	34	309
	Five normal scientific schools, at Padua, Naples, Palermo, Pavia, Rome (universities); three schools of application for civil engineers at Pisa, Genoa, Padua (universities)		a1, 761
1862-'71	Superior special mining schools (Caltanissetta, Agordo, Iglesias, Carrara)	23	52

a Increase to 1722 in 1891-'92.

SUPERIOR MILITARY INSTRUCTION.

Date of foundation.		Professors.	Pupils.	Courses.
1863	Turin School of Application for Artillery and Military Engineering	33	208	2 years.
1867	Turin School of War	20	95	2 and 3 years.
1869	Turin Military Academy	40	297	3 years.
1883	Florence School of Application Military, Medicine, and Surgery	9	121	8 years.
1859	Modena Military school	111	1,051	
1872	Parma Normal School, Infantry	26	225	10 months
1872	Pinerolo Normal School, Cavalry	27	54	Do.
1874	Naples Military College			5 years.
1849	Florence Military Academy			Do.
1859	Milan Military College	137	938	Do.
1883	Rome Military College			
1886	Messina Military College			Do.
	Total	405	3,039	

The diploma of the first and second years of the military academy admits pupils respectively to the first and second year of the physico-mathematical faculty of the universities.

The diploma of the third year admits to schools of application for civil engineers.

SPECIAL SECONDARY INSTRUCTION LEADING TO UNIVERSITIES.

Date of foundation.		Professors.	Pupils.
1817	Aquila	7	27
1817	Bari	8	34
1812	Catanzaro	6	21
	Total number of pupils		82
	Superior special scientific departments: Milan, astronomical observatory; Forli, meteorological and geodetical sections; Naples, meteorological and astronomical sections; Venice, meteorological and astronomical sections		194
	(Special Royal Obstetric Schools: Milan, Novara, Vercelli, Venice)		91
	Superior Schools of Medicine and Veterinary Surgery:		
1859	Milan	10	60
1856	Naples	8	141
1860	Turin	6	56
	Total number of pupils		257
	Special School for Social Sciences, Florence	15	69

STATISTICS OF THE TWENTY-ONE UNIVERSITIES. *a b*

Date of foundation.		Pupils.					Professors.
		Jurisprudence.	Mathematics and physics.	Philosophy and letters.	Medicine and surgery.	Total.	
1200	Belogna	320	143	41	759	1,264	102
1626	Cagliari	68	7	.....	62	137	37
1427	Camerino	15	.....	.....	82	97	20
1434	Catania	213	18	4	224	459	65
1391	Ferrara	14	12	.....	23	49	21
1243	Genoa	248	73	31	466	818	66
1290	Macerata	105	.....	.....	.....	105	14
1519	Messina	82	25	2	100	209	62
1678	Modena	65	24	.....	232	321	70
1224	Napoli	1,652	302	125	2,025	4,104	284
1222	Padua	224	293	133	518	1,168	115
1805	Palermo	446	145	37	525	1,153	87
1512	Parma	48	21	.....	169	238	58
1300	Pavia	238	183	25	617	1,063	72
1276	Perugia	44	.....	.....	86	130	23
1338	Pisa	164	168	38	253	623	69
1303	Roma	553	153	94	519	1,319	117
1677	Sassari	38	.....	.....	82	120	28
1300	Siena	48	.....	.....	123	170	32
1404	Turin	722	294	131	1,086	2,233	137
1564	Urbino	23	4	.....	68	95	19
	Total.....	5,234	1,849	661	7,759	c16,496	1,498

a The universities having the faculties of law and jurisprudence are 21 in number; physics and mathematics, 15; philosophy and literature, 11; medicine and surgery, 20. The special institutes and schools found in the universities are 3 schools for notaries; 2 schools of political economy and administration; 2 institutes of physics; 2 institutes of chemistry; 3 schools of engineering; 1 school of differential calculus; 6 schools of projective and descriptive geometry; 1 school of graphic statics; 9 schools of design, architectural and ornamental; 5 normal scientific schools; 6 observatories of astronomy; 8 observatories of meteorology; 2 seismic observatories; 3 museums of mineralogy; 1 museum of geology; 6 museums of archaeology and numismatics; 1 special superior school of agriculture; 6 schools of normal literature; 3 pedagogical museums; 2 institutes of physiology; 10 institutes of obstetrics and gynecology; 4 institutes of anatomy; 2 institutes of propædæutics, legal medicine, and phrenics; 1 institute of psychiatry; 1 institute of experimental hygiene; 1 institute of special surgery and demonstrative pathology; 2 institutes of veterinary science; 1 institute of zoölogy; 2 schools of pharmacy; 4 schools of veterinary surgery; 3 museums of surgical instruments; 3 museums of zoölogy; 20 botanic orchards.

b As adjuncts to university work are 239 laboratories and cabinets, as follows: 17 for human anatomy; 17 for pathological anatomy; 15 for comparative anatomy; 3 for surgical and topographical anatomy; 17 for experimental physiology and general histology; 3 for microscopic, embryologic, and obstetric research; 8 for general pathology; 1 for vertebrate anatomy and medicine; 2 for special surgical medicine; 1 for neuro-pathology, electrotherapeutics; 10 for legal medicine and hygiene; 2 for veterinary pathology, anatomy, and medicine; 2 for anthropology; 1 dermo-syphilopathic; 18 for materia medica and experimental pharmacology; 18 for pharmaceutical chemistry; 17 for general chemistry; 18 for physics and experimental physiology; 15 for mineralogy; 13 for geology; 3 for geodesy; 1 for geography; 1 for archaeology; 1 for agricultural chemistry; 1 for cryptogamic botany; 1 for agronomy and rural economy; 20 for medical botanic orchards; 12 for zoölogy; 1 for zoötecnica. Also 110 clinics, as follows: 18 for medical propædæutics; 18 for surgical propædæutics and operations; 11 obstetrical; 14 dermopathic; 14 syphilopathic; 16 ophthalmic; 2 pathological; 1 physiological; 10 therapeutical; 1 psychiatric; 1 oto-laryngo-rhino-laryngeal; 1 medical and surgical veterinary traumatological.

c Total 16,922 in 1891-'92.

EXTRACT FROM THE NEW BY-LAWS OF THE ITALIAN UNIVERSITIES,
OCTOBER 26, 1890.

The directive board of each university is composed as follows: One rector, one academic council, the presidents of each faculty, the council of each faculty, the assembly of the ordinary and extraordinary professors of the university.

Fees of admission.

[1 lira=19.3 cents.]

Faculty.	Lire.	Dollars.
Jurisprudence.....	860	165.00
Physics, mathematics, and scientific applications to engineering.....	860	165.00
Philosophy and literature.....	450	87.00
Medicine and surgery.....	860	165.00
Superior special courses:		
School of application for engineers.....	860	165.00
Laurea: chemistry and pharmacy.....	450	87.00
Notary and attorney.....	200	39.00
For practice of pharmacy.....	200	39.00
Medicine, veterinary.....	168	32.40
Agriculture.....	168	32.40
Obstetrics.....	89	17.00
Phlebotomy (minor surgery).....	57	11.00

The scholastic year is nine months and a half.

For admission to the first year and to any faculty the "diploma of the licei" is required. The diploma of technical institutes (section physico-mathematical) admits only to the physico-mathematical faculty.

Foreigners wishing admission to Italian universities must produce a document stating that the applicants have accomplished such studies as would entitle them to admission in a university of their own country. Or they must submit to special examinations.

Examinations of Italian universities for graduation are both written and oral. A special commission of university professors constitutes the board of examiners. They are appointed by the rector as follows: For diploma of special sciences, commission of 3 members, 20 minutes. For "laurea" of a faculty, commission of 11 members, 40 minutes. The examinations are public.

Chairs.—The chairs of ordinary professorships in the universities and superior special institutes of Italy are granted only by titles or examinations. Examinations are in Latin for the two chairs of Greek and Latin literature only. The special commission of examiners (5) is appointed by the minister, directly, on the advice of the superior council of public instruction.

The examinations are public as well as the votes of the examiners. The commission draws up a report, which, whether favorable or not to the candidate, is published *in extenso* in the *Gazzetta Ufficiale* of Italy.

For places of free public professorship in universities and superior and special institutes and schools the examinations are made by a commission composed of a number of ordinary professors of the university, or superior special institute, and an equal number of outside professors.

UNIVERSITY REFORMS.

During the last few years disturbing influences have been manifest in several universities, among them Turin and Naples.

The condition has been extensively discussed by the educational and political press and in parliament. The conclusion has been reached that a radical reform of the Italian universities is necessary, to bring them into accord with the most recent requirements of philosophy and science.

The claims of the would-be reformers are substantially as follows: First, the university is to be made independent of either Government

or province, as were the ancient studios of Bologna and Pavia and the celebrated school of Salerno. Second, free matriculation, viz, the faculty to grant permission to everyone to be admitted on examination even without having followed the official course of studies. Third, participation of students in the election of the rector, which would put an end to all misunderstanding between students and professors. Fourth, liberty of study, viz, the faculty to allow the students to follow as many courses as they may desire and the regulation to be abolished which obliged them to follow a given number in order to obtain the laurea. Fifth, liberty of teaching by the suppression of all distinction between ordinary, extraordinary, substitute and free professors. Sixth, abolition of the thesis for obtaining the laurea. Seventh, the participation of the superior special institutes in the regulations which correspond to those of the university faculties. Eighth, the right granted to women (who are admitted in Italy to all universities and superior special institutes) to practice in all liberal professions, which right is now reserved for men only. Ninth, the participation of Italians in the seeking of foreign diplomas and laureas and *vice versa*.

Hon. E. Villari, ex-minister of public instruction since 1890,¹ submitted the above-mentioned claims to the supreme council of public instruction of Italy for consideration. It is expected that the long-sought reform in the organization of Italian faculties will soon become a fact.

At the meeting of the university congress held in Palermo on the 22d of April, 1891, the following resolution, embodying the main principle of the reform, was voted upon:

Resolved, That the juridical personality be granted to the university as the most potent means towards obtaining didactic and disciplinary autonomy, state interference to be forbidden except as regards financial control within the limits of the legal donation.

ACADEMIES, ATHENÆUMS, SUPERIOR INSTITUTES.

For the study of science, philosophy, literature, fine arts, social sciences, agriculture, and mathematical sciences there are 59 academies and higher institutes. These include, among others, the Royal Academy of Sciences in Bologna, the Sicilian Society for the Study of National History in Palermo, the Dante Alighieri Society for the Diffusion of the Italian Language in Rome, the literary academies of Bossano, Bergamo, Brescia, and Venice, the school for electrical study in Milan, the Italian scientific and geographic societies of Rome, the school for stone carving at Parma, the national and royal associations in Naples, the medical and scientific societies of Turin, the royal academy, "dei Lincei," in Rome, and others too numerous to mention.

¹ Succeeded by the Hon. F. Martini, May 15, 1892.

VI.—FINE ARTS.

FINE ARTS—ACADEMIES, INSTITUTES, AND SPECIAL SCHOOLS.

Date of foundation.		Professors.	Pupils.
1803	Bologna Academy and Institute.....	17	64
1769	Carrara Academy.....	7	230
1576	Milan Academy.....	27	1,200
1652	Torino Academy.....	17	322
1808	Venice Academy and Institute.....	13	101
1757	Parma Academy and Institute.....	9	231
1786	Modena Academy.....	11	358
1356	Florence Institute.....	13	308
1850	Lucca Institute.....	7	213
1835	Massa di Carrara Theorico Practical Institute.....	2	18
1822	Naples Institute.....	26	318
1874	Rome Institute.....	18	207
1874	Rome School of Calcography.....	3	.....
1874	Palermo Institute.....	9	201
1878	Urbino Institute.....	4	23
1757	Reggio School of Design.....	5	82
	Total.....	188	3,876

To the superior and special instruction of fine arts belong the schools of ornamental and architectural design attached to the universities of Cagliari, Catania, Messina, Naples, Padua, Palermo, Pavia, Pisa, and Rome, already mentioned; also the autonomous academies, institutes, etc., given in a separate list.

The following bureaus may be noted here: Excavations of antiquities, Pompei; excavations of antiquities, Taranto; antiquities and monuments (special) of Rome, Rome; central direction of the twenty-nine bureaus for the permission to export objects of art or antiquities, Rome.

CONSERVATORIES OF MUSIC.

Founda- tion.		Professors.	Pupils.
1808	Milan Conservatory and School of Choreography.....	36	204
1825	Parma Conservatory and School of Choral Singing.....	18	85
1618	Palermo Conservatory.....	28	55
1806	Naples Conservatory and School of Normal Choral Singing.....	42	231
1860	Florence Conservatory.....	25	219
1860	Florence School of Declamation.....	5	32
	Total.....	154	826

FINE ARTS AND ANTIQUITIES.

These are fully represented in the museums at Bologna, Cagliari, Este, Florence, Milan, Palermo, Parma, Portogruaro, Ravenna, Rome, Sassari, Syracuse, Turin, and Venice; by the galleries at Florence, Modena, Rome, and Venice; by the pinacotecas of Bologna, Lucca, Milan, Palermo, Parma, and Turin, and by the national monuments of Genoa, Milan, Urbino, Venice, and Florence. Nor should the famous frescoes at Florence and Milan be omitted, as all such art work is truly educational in character.

NATIONAL MONUMENTAL (EX) CONVENTS AND CHURCHES.

The national monuments include both convents and churches. These are found in all sections of Italy. They include edifices which once being convents are now used for other purposes. Palermo, Naples, Pavia, Ravenna, Rome, Viterbo, and Monte Cassino may be enumerated among the number.

VII.—PUBLIC LIBRARIES. *a*

National.	Government.	University.	Ex-convent.
1. Florence.	8. Caltanissetta.	22. Bologna.	36. Avellino.
2. Milan.	9. Catania.	23. Cagliari.	37. Calci.
3. Naples.	10. Cremona.	24. Catania.	38. Cassino.
4. Palermo.	11. Florence.	25. Genoa.	39. Cava de' Tirreni.
5. Rome.	12. Florence.	26. Messina.	40. Grottaferrata.
6. Turin.	13. Florence.	27. Modena.	41. De Girolomini.
7. Venice.	14. Lucca.	28. Naples.	42. Certosa St. Martine.
	15. Modena.	29. Padua.	43. Certosa Pavia.
	16. Naples.	30. Pavia.	44. Subiaco.
	17. Parma.	31. Perugia.	
	18. Parma.	32. Pisa.	
	19. Rome.	33. Roma.	
	20. Rome.	34. Sassari.	
	21. Rome.	35. Urbino.	

a Communal and private libraries not counted.

Number of works given to read, 1890	1,021,585
Number of readers, 1890	825,634
Average days of public reading in the year 1890	272

VIII.—PUBLICATIONS, YEAR 1890.

Instruction and education	384
School books	775
Philology, history, and literature	358
Philosophy and theology	108
Modern literature	1,162
Jurisprudence	370
Politico-social sciences	427
Physics, mathematics, and natural science	369
Medicine	832
Engineering, railroad	200
Agriculture, industry, and commerce	1,062
History and geography	550
Contemporary biography	490
Fine arts	152
Army and navy	130
Bibliography	89
Religion	912
Encyclopedias	2
Academy's reports	15
Parliamentary acts	576
By-laws and finance	1,087
New political newspapers	289
Total	10,339
Musical publications	440
Total	10,779
Modern Italian language	9,938
Latin language	260
Balance (modern languages)	581

THE PRESS, 1891.

Political newspapers.....	461
Sectarian newspapers.....	60
Jurisprudence, political economy, social sciences.....	291
Agriculture, industry, commerce, and finance.....	178
Literary, literature and science, history, archæology, bibliography.....	123
Educational and didactic.....	54
Physics, mathematics, practical mathematics, industrial technology.....	29
Medical surgery, anthropology, natural history.....	93
Geography and travels.....	11
Musical and dramatic.....	28
Fine arts.....	11
Military.....	11
Religion.....	115
Fashion, humoristic, Sunday.....	108
Railroads.....	23
	<hr/>
Total in 1871.....	1,596
	<hr/>
Increase.....	756
	<hr/>
	810

IX.—THE BUDGET OF PUBLIC INSTRUCTION.

The budget for the education of the Italian nation (about \$18,500,000) is an object of criticism when compared to that of army and navy (about \$86,000,000). The abnormal disproportion finds its explanation in the situation of Europe; also in the constant efforts of the Italian cabinets and chambers, since the war of independence, to solve the problem of national defense before any other.

However, the total budget of instruction, which was in 1872 about \$9,000,000, reached in 1890 the sum of about \$18,500,000, and there is a manifest tendency towards further increase. This is shown by the appropriations granted for school buildings, in addition to the annual amount for maintenance; or to teachers, pupils, and families in the form of subsidies and for scholarships in the normal and superior institutes and for the pursuit of special studies abroad, etc. Also in the form of premiums to all kinds of scientific, literary, and philosophic publications; to competitors among the graduates from secondary institutions and to philanthropic individuals who foster with their own means the development of elementary and normal culture among the people.

Elementary teachers whose salary has received a small increase have been benefited by the establishment of a pension fund, amounting in 1890 to 34,615,403 lire or \$6,681,372.

The budget for public instruction in Italy was divided as follows for 1889-'90:

	Lire.
Government contribution.....	42,208,101
Provinces contribution.....	2,168,833
Communes contribution.....	47,365,966
	<hr/>
	91,742,906
	Or \$17,705,980

Of the sums contributed by the Government, one-third is for superior and special instruction, fine arts, and antiquities. The contribution of the provinces is exclusively for technical and nautical institutes. That of the communes, with the exception of about \$500,000, is for elementary and normal schools.

SCIENTIFIC AND ARTISTIC PATRIMONY OF THE NATION (1890).

	Lire.
Libraries, books, manuscripts, etc., value	51,431,621
Collections, natural history and botanic orchards.....	5,657,334
Antiquities	140,447,366
Industrial museums	454,756
Artistic printings on sale at Royal School of Calcography of Rome and Steel Carving of Parma.....	1,275,780
	<hr/> 207,266,857
	Or \$40,002,513

X.—SCHOLASTIC ADMINISTRATION.

Scholastic administration is vested in the minister and superior council of public instruction, composed of 32 members, 2 inspectors, general and central.

There are 69 provincial councils, presided over by the prefect, with 1 supervisor and 10 members; 69 "provveditori" of studies; 69 inspectors (male and female) of "circondari"; 69 delegates of "mandamenti;" 6 special female inspectors for the circles of Milan (2), Rome, Naples, Florence, and Palermo, within which the female institutes for women are found.

The administration of fine arts and antiquities is as follows: One royal permanent commission of 5 members; 6 special technical officials for antiquity, monuments, excavations, museums, and art galleries; 6 special officials for the license of exportation of fine arts and antiquities; 70 commissioners for the preservation of monuments of fine arts and antiquities in the different cities; 69 provincial inspectors.



CHAPTER XI.

EDUCATION IN KOREA.

By Mr. POM K. SON,

Formerly member of the special embassy of Korea to the United States.

In the northeastern part of Asia, located east of China and west of Japan, in latitude 30° to 40° north, longitude 125° to 130° east, lies the peninsula of Korea. This country, known in history under many names, is most familiar to the Western world as Korea. It really dropped this name when the dynasty of Koriu ceased to exist, about 500 years ago. Since that time it has been known to the Oriental world as "Ta-Jo-Son" (Great Morning Calm), which is the name of the reigning dynasty.

This little country, about the size of the State of Minnesota, is similar to Florida in shape, and resembles California in physical features. It is bounded on the east by the Japan Sea and on the west by the Yellow Sea. Its northern boundary is the Ap-Nok River, which separates it from China, and the Tuman River, which separates it from Russia, together with a small portion of rocky country, its only connection with the main land. Well protected on all sides by water, it has sturdily resisted all foreign invasion and has justly earned for itself the soubriquet of the "Hermit Nation."

Ranges of mountains, well covered with pine and a great variety of hard wood, traverse the country from north to south. It is watered by many navigable rivers, which furnish communication between nearly all parts of the country. The most important of these are the Han and the Ta-dong.

Kang-won-do, a province of the eastern coast, possesses many remarkable physical features. The most wonderful of these is the Gum-kang-san, or Diamond Mountain, famous not only in Korea, but throughout the entire Chinese Empire. Entirely bare of vegetation, its sharp, angular surfaces, reflecting the light, present the most brilliant and changing colors. Under favorable conditions a remarkable mirage is often seen from the top of this mountain. Hundreds of human figures, sometimes on horseback, sometimes with waving flags and banners, are reflected against the clear sky, and even whole cities have been sharply outlined. So far no explanation has been given of this phenomenon. A giant's causeway, far exceeding in beauty the one on the coast of

Ireland, is found here. It is composed of numerous groups of pillars, rising 40 feet and upward into the air, each group consisting of hundreds of pillars of glistening whiteness.

The country is rich in gold, iron, coal, and other minerals. More than one-half of the vast mines which are known to exist are gold mines. Only two or three, however, are opened, and the gold dust, which is an important article of commerce, is washed out of the streams. Iron is also found in large quantities, and since the country has been opened to foreigners coal has been mined and is gradually being used as fuel.

The climate corresponds to that of the Middle Atlantic States. The soil is fertile, and abundantly supplies grain and pasturage with little trouble to the people. Most of the fruits and vegetables grown in the United States are common to Korea, besides many not known to America. The fruits are abundant and of excellent flavor, though small. The tuberous vegetables grow to an enormous size.

The cattle are of excellent breed, being large, strong, and quite equal to those raised on the prairies of America. They are peculiar in having a very quick gait. It is estimated that if the cattle were equally divided among the people there would be one for each adult. The native horses are strong, but small, and are used only for riding. The waters abound in fish of great variety. Whales, which have been driven from other seas, make their home in the seas around Korea, where they live undisturbed, the people of that country not knowing their value.

The principal occupation of these people is agriculture, but many skilled mechanics find employment, and the arts and sciences, although not so flourishing as in former centuries, are still cultivated. The women are employed in embroidery, weaving, dressmaking, and the silk industry.

Many years ago the Government employed large numbers of female assistants in hospital and other charitable institutions, but this practice has now fallen into disuse.

The southern part of Korea has always been its most flourishing section, and to-day the industries of the country are most prosperous in the provinces of the old Sin-la dynasty.

Although Korea has held herself aloof from the rest of the world, she has instituted manufactures and maintained them from her own resources. Most of the Japanese works of art so prized at present are the result of Korean skill. During many centuries the Japanese have been taking from Korea vast quantities of fine manufactured goods and works of art, which they have imitated and claimed as their own. Silk, cotton, linen, and grass fabrics, embroidery, paper, matings, brass, iron, lacquered and bamboo wares, as well as shoes, hats, cotton wadding, and furniture, are among the manufactures which have been carried on for thousands of years by this "Hermit Nation."

In 1883 three seaports were opened to foreign commerce. At that time these ports, which to-day are bustling with commerce, were a mere wilderness. Since intercourse was established with other countries the imports and exports are about \$5,000,000 annually. Grain valued at \$2,500,000, together with great quantities of hides and gold dust, are among the exports. The commerce is yearly increasing.

The Koreans are among the oldest people of the world. They have a written history dating back 3,000 years, but their origin is shrouded in doubt. In the year 1122 B. C. the viscount Ki-ja emigrated from China to Korea with 5,000 men, both skilled artisans and men versed in literature and science. Several hundred years later a small portion of the northern part of the country was invaded by the Chinese, possibly leaving in Korea a few hundred soldiers. Again, during the reign of the Emperor who built the great wall of China, about 200 years B. C., another emigration of learned Chinese occurred. The Chinese some centuries afterward conquered two of the kingdoms in the central part of the country, and three hundred years ago, during a war with Japan, Korea asked assistance from China, when, doubtless, more Chinese soldiers were left in Korea.

It may readily be seen that in about 3,000 years there have been several times when the Chinese and Korean races may have mixed. Considering the small number of Chinese and the long periods which elapsed between these immigrations there is little reason for supposing that the original Korean type has been materially changed by this commingling with the Chinese.

No record exists of an early immigration from Japan, but during the many wars waged between these two nations it is probable that many Japanese soldiers remained in Korea. In fact, the Japanese records mention that during the last war, which continued eight years, many soldiers deserted from the army. These men, for their protection both from their own army as well as from the natives, assumed the Korean dress and manners, and lost their identity as Japanese.

Both from the history of the western nations and from Korean history, it is learned that Arabians settled in this country and exported from it to Bagdad and Damascus ginseng, aloes, camphor, cinnamon, ginger, deer horn, nails, saddles, porcelain, and satin.

There are circumstances tending to establish the belief that the inhabitants of certain portions of Korea may have had a Caucasian origin.

Both men and women were tall and well-formed, and in personal appearance and manners more likely to command the respect of foreigners than either the Japanese or Chinese in their original conditions. Their faces were broad and features large, with finely shaped heads. The stolid, impassive expression of the Chinese, or the sly, crafty appearance so commonly observed in Japan and China, was rarely noticeable among the Koreans. We thought them frank and honest in expression, pleasing though timid. Their complexion was of a redder tint than that of the Japanese or Chinese. The hair varied in color from black to light reddish-brown.—(Extract

from a small volume issued by the Navy Department written by Mr. Foulk, naval attaché of the United States legation, afterwards chargé d'affaires.)

The Kingdom of Korea, having an area of 92,000 square miles and a population of 28,000,000, is divided into eighty *do* or states, with governors appointed by the King. These *do* are subdivided into 360 parts under second-class governors, and again divided into smaller parts under petty officers. Besides these divisions there are four military districts under governors-general and about forty military posts, situated on the sea coast, governed by military generals.

There are about two hundred fortified towns belonging to the different *do*, and hundreds of postal districts under the jurisdiction of the postmasters attending only to the Government mail.

The capital city is Séoul, with a population of about 250,000. It is governed by a mayor appointed by the King.

GOVERNMENT.

The Government is an absolute monarchy. It has written laws, but no constitution, and each executive department (state, war, etc.) has rules approved by the King and Parliament. This form of government has existed since 1394 A. D. and in a modified degree since the fourth century B. C. It has three branches, legislative, executive, and judicial.

The legislative power is in the hands of the King. Three prime ministers and an indefinite number of senators are always in session. They make laws with the consent of the King, and can demand a hearing, whenever they consider it necessary to amend any law. These three ministers form the highest court, and among other matters have the oversight of the private conduct of the King.

A body of 1,000 noblemen, both civil and military, of nine ranks, forming an upper and lower house, meet in session when any matter of importance, in their opinion, requires attention. The upper house is formed of the three higher ranks and the lower of the remaining six. The king often calls either one or both of these houses to confer with him.

Another party holding power which was granted to it by law is composed of literary men from all parts of the country, and is really the voice of the people. In all matters of importance their advice is asked by the king and petitions presented by them receive respectful consideration. Originally the power of this party was limited to moral and educational matters, but they have so far stretched the significance of these terms that their voice is heard in all political matters.

When it is considered necessary for them to petition the king they meet at the capital, and proceeding to the gate of the palace in a body, about 1,000 men, leave their petition resting against the gate. The king's private secretary, who acts as a medium, takes the petition to him. While the king is considering their request, they remain outside

seated on mats. Sometimes this conference lasts for days, the people of the city paying for the mats, tobacco, and lights.

There is an old law to which recourse may be had to obtain rights from the king. This law allows to the people, high and low, civil and military, the right to petition the king. Should this fail, still another law allows them to remove "the evils around the king." This means revolution. Although these laws have never been enforced, their existence gives to the petitions of the people a power respected by the king.

In the executive there are seven departments: First. The civil, who certify to the highest officers and second-grade governors. Second. The treasury department. Third. Department of official etiquette. Fourth. The war department. Fifth. Department of public works. Sixth. Department of the interior. Seventh. Department of foreign affairs. Each department is administered by three ministers and chiefs of divisions.

The judicial branch is divided into six distinct courts: First. Să-hŭm-bŏŏ (highest court, having no parallel in this country). Second. Gŭm-bŏŏ (star-chamber). Third. Parliament or supreme court. Fourth. State court. Fifth. County court. Sixth. Department of justice.

The judges of the first, or Să-hŭm-bŏŏ, are the highest authority in the country, almost equal to the king. They can correct the administration and private conduct of the king. They have power to impeach all high officers, supervising all other courts. The second, or Gŭm-bŏŏ, tries high officers and high criminals of any rank. This is the only court where the king presides during the trial of criminals. The third, fourth, and fifth, supreme, state, and county courts, correspond to the courts of the same names in America. When the supreme court fails to give satisfaction to a subject he has a right to appeal directly to the king. This is confined to the common people who have no influence at court. There are two ways: either to ring a large bell placed at the palace gate for this especial purpose, which can be heard for miles, or by attracting the attention of the king when he is out of doors by striking a gong before his palanquin. The man is at once taken in charge by the police and his case is listened to, and if he has been unjustly treated his wrongs are righted. The sixth or last, the department of justice, keeps a record all the courts and executes the sentences of all the other courts in the capital city and has restricted power over all the courts of the country.

The ancient Koreans worshipped God in the mountains, and, although this old religion is nearly lost in the present religions of Confucius and Buddha, they still hold in great respect the mountains where the ancient Koreans used to worship. Buddhism was introduced into Korea from India and Confucianism from China. The first is the religion of the people and the second that of the court.

Although Confucianism is counted a religion, it is really a system of sociology, and has none of the elements of a religion. It refers in no

way to a future life or to the immortality of the soul. Confucius was a moralist and a statesman, but not a savior; and his disciples are moralists and economists. The followers of Confucius have a form of worship which existed long before his time and was continued by him, and the temples built to him are only monuments of respect to his memory, and show the esteem in which his teachings are held. They are built by the Government, and never opened to the common people except for educational purposes.

The so-called ancestor worship is one of the teachings of Confucius, and is common to all Asiatic people. In reality it is no worship at all, but simply a memorial service.

The Chinese accept Confucius in every detail, both as taught by Confucius himself and by his disciples, some of whom were contemporary with him.

The Japanese recognize both religions equally, but Confucianism in Japan has a direct bearing upon everything relating to human affairs, especially the extreme loyalty of the people to the emperor, while the Koreans consider it more useful in social matters than in any other department of life, and hardly consider its precepts in their business and mercantile relations.

Buddhism is the real religion of the Korean people. It was supported by the Government in ancient times until Confucianism was made the court religion. At present it has many temples supported by the women of Korea, who are all worshipers of Buddha. This religion in some respects resembles Christianity both morally and spiritually. It inculcates all the moral principles found in the ten commandments of Moses, and it teaches that the spirit after death goes either to heaven or to hell, or becomes re-embodied in some animal or plant, and that salvation is secured through faith, morality, and knowledge or meditation. There are two forms of Buddhism, higher and lower. The high Buddhists are found only among the philosophers. They are either priests or celibates and they devote themselves to the study of the soul rather than to prayers and ceremonies.

These two religions have had great influence in forming the Korean character, Confucius teaching them to care for the things of the present, and Buddha turning their thoughts to a life to come, in which they will receive in accordance to the things done here. Confucius teaches revenge. Buddha forbids it, and says "Thou shalt not kill." This command refers not only to man, but to animals; and Buddhist priests eat no meat.

There are four moral principles which govern Koreans: Honesty in their dealings, respect for women, faithfulness to parents, and humility. Polygamy is not practiced in this country, and no wife would pardon unfaithfulness in her husband. The genealogy of Koreans is kept with great care, and no man whose lineage is not pure can ever become a high official.

Two schools of philosophy are recognized in this country: the ancient Korean philosophy, which teaches that there are five elements—metals, plants, water, fire, and earth; and the Buddhist philosophy, which makes only four—earth, water, fire, and air or wind. Philosophy is a subject which interests Koreans, and much study is devoted to it.

In the twenty-third century B. C. the Koreans were I think a lettered people, and in the twelfth century B. C. they had schools to teach reading, writing, music, and etiquette. From the third century B. C. up to the present time education has gradually increased, and during the last five hundred years it has attained a much higher degree of excellence. During the present dynasty free schools and many other kinds of educational institutions have been established, and, with the exception of a few serving girls, all men and women can read and write. Education in Korea is held in the highest esteem, and a literary man is received with less formality by the prime minister, who is almost equal to the king in rank, than the nobleman or high officials. Not only are the respectable classes educated, but even the dancing girls must study under teachers dancing, walking, horseback riding, music, poetry, reading, writing, and painting before they can profitably fulfill their professional duties.

Books were first printed about ten centuries ago, when the reigning king ordered 150,000 printing blocks to be made for the purpose of printing several hundred volumes of special Buddhist books. These blocks, 18 by 20 inches square by 1 inch thick, are carved in wood, in both Korean and Chinese. At present they are seldom used, but are stored in buildings devoted to this purpose. They have become the property of some Buddhist temple.

Every nobleman, however poor, has a large private library of thousands of volumes. These are loaned to all who ask, and are kept in almost constant circulation.

The scholars frequently spend their entire time in writing books, both of prose and poetry. They are written on both sides of the thinnest possible sheets of paper and piled upon the floor till they reach to the chin. Many of them accomplish two or three "chins" during their lifetime, and so great is their respect for literature that on no account would they step upon them or destroy a single written word.

The Korean language and literature have become so mingled with the Chinese that it is difficult to convey to a foreigner a correct idea of pure Korean pronunciation and idioms.

The Chinese language is to the Korean what the Latin is to the English. It is never spoken by the Koreans, and is read only by the educated men. Their scholars study its old records and quote largely from it as a classic. Many important books and all official documents are published in Chinese. This language has two styles, the colloquial and formal; but they are so far removed, each from the other, that a person familiar with the former could hardly understand the latter.

This language, which is merely a collection of hieroglyphics, is very difficult to learn, since every child must know not less than 1,000 of them in order to study the language. These must not only be committed to memory, but must be learned so they will be recognized at sight. Its introduction into Korea has had a very marked tendency to retard civilization. Its poetry and songs have also suffered by this admixture, many of the musical tones of the Korean language being lost.

The Korean language, like the English, has 25 letters and the words are of one or more syllables, while the Chinese words have generally but one. Many Chinese words have been incorporated into the Korean language; for example, all words or syllables ending in *ng* have a Chinese origin. The Korean language for centuries has preserved its grammatical construction, which, like its alphabet, is based on scientific principles. Like the Chinese, it is written in perpendicular lines, and the principal words of the sentence have the modifying words grouped directly around them. Metaphors and personifications are more used in the Korean than in either the Chinese or Japanese languages.

COMPARISON WITH CHINA AND JAPAN.

Superficially considered, the Koreans resemble the Chinese and Japanese in many respects; but, closely observed, they are found to be a nation of marked characteristics, with views broader than the Japanese and theories more rational than the Chinese. On account of their unfavorable geographical position, they seem to be behind Japan in adopting modern ideas, but to the student they are really in many respects an advanced people, and, although not considering themselves superior in everything to their neighbors, they are very proud of their culture. They speak of themselves as the "nation of culture," and of China and Japan as the "barbarous nations."

The slight body, the color of the hair and skin, the use of rice as the principal article of food, the style of dwelling, the wearing of loose garments, and the existence of Buddhist temples and followers of Confucius are the chief points of resemblance between Koreans and the people of China and Japan.

Examining the particulars mentioned, it will be seen that they point as surely to differences as to resemblances. In stature the Koreans approach much more nearly to the Caucasians than do either the Chinese or Japanese. The complexion of the Chinese is decidedly yellowish, that of the Japanese is brownish, while the Koreans are lighter than either and of a reddish tint. Rice is to the Asiatic races what bread is to the European; and the differences in the way of cooking and serving it are as marked among the different Asiatic nations as are the varieties of bread among the Europeans, while in other foods used by the Asiatics the difference is greater; for example, a Korean must have

beef twice a day, a Chinese has pork, and a Japanese either raw or cooked fish. Except in Korea, beef can not be found among the natives.

The men's dress in Korea is of a style peculiar to that nation, while the black dress of the Japanese, except in color, is borrowed from the Chinese. The dress of the Korean women is similar to the dress of American women, except the small waist, while the Chinese and Japanese women wear the loose dress like the men.

Buddhism and Confucianism are found in each of these three nations, and the mental tone of the people is shown in the manner of treating these religions. It is hardly possible in a brief space to explain a matter so complicated, but it is fair to say that China and Japan pay attention to the ceremonial service at the expense of the religious teaching, while Korea devotes her attention to the sacred teachings and the study of the religious doctrines and theories of philosophy.

Korea may allow to China the glory of a more ancient history, and to Japan the late reformation in her government and the more skillful manufacture of silk and lacquered wares; but Korea's political institutions, which mark her independent characteristics, were organized on scientific principles many centuries ago. The feudal system was abolished in Korea about the time it was adopted in Japan. Free schools, public hospitals, almshouses, and civil-service examinations are old institutions to Korea, unknown, except civil service in China, in both the other countries.

The morality and general culture of Korea is on a much higher plane than that of China and Japan. Loyalty to the court is considered a strong element of morality in Japan, but in Korea patriotism ranks before it.

Carefully studied, the differences between these three Asiatic peoples will be found to be more pronounced than the differences between the Americans, Germans, and French, not only as regards physical, but mental qualities.

PRIVATE SCHOOLS (HAK-BANG).

The private schools of Korea are to the Koreans in some degree what the public schools are to the United States, since through them the great mass of the people receive their education. Educated men, who are at the same time engaged in some other employment yielding an insufficient support, conduct these schools and receive from each pupil a small tuition fee. The number of pupils, always boys, never exceeds forty. They begin going to school from 6 to 10 years of age and usually finish their education at these schools in 6 years.

The first book used is the *chunja* or 1,000 words. It is written in Chinese characters and no word is repeated. With each Chinese word is learned the corresponding Korean word.

The lines are of four words each and generally refer to natural facts; for example, first line: "The heaven is dark and the earth is yellow;"

second, "The sky is broad and the land uneven;" third, "When the cold comes the heat goes." The lesson of four words is assigned by the teacher in the morning. Questions are asked by the pupils and explanations made by the teacher; then the children, seated on cushions before desks with their faces to the wall, repeat the lesson aloud twenty-five times, four times each day. Each child has a counter on which he records his progress. These are made of a kind of very stiff, oiled paper, beautifully decorated, about 7 inches long and 2 inches wide. At the top is a little opening, like a door, which marks 100; a short distance below is a group of five similar openings, which denote 10; still lower another group of five for units. When the child has repeated the task once he opens one of the doors of the units group. He continues opening the doors till after the sixth repetition, when he closes the last one opened. When he has closed all the five doors of the units group he opens one in the group of tens and begins once more with the units group. When he has opened and closed all the doors of the tens group he opens the top door and the lesson is completed for the day. Should any little Korean steal a count or misbehave he is made to stand on a block or is whipped on the leg. The principal work of the teacher after the lesson is given out consists in watching that the pupils keep an honest count, in listening to the repetition of the lesson which the child has memorized, and in correcting the pronunciation.

Classes are not formed, but each child finishes one or more books, according to his ability.

Before beginning a new book, each child must be able to repeat the *chunja* from the beginning to the end.

Penmanship is considered one of the most important branches of learning, and the child begins the practice of this art when he begins his education at school and can continue it through life, for he learns only Chinese characters, and as there are fifty thousand of these, he can always find new matter for practice. The child begins this study by following, with a brush dipped in India ink, an outline of the character about 4 inches square, which has been faintly drawn by the teacher. Twenty or thirty of these characters constitute a lesson, and are usually learned in one day.

About the second year he begins the primary lessons for boys. This book is a collection of moral laws and sentiments; for example:

Between the heavens and the earth the human being, on account of his moral qualities, is superior among all things, therefore we are governed by these five rules, viz: (1) Respect between king and subject. (2) Affection between parent and child. (3) Decorous bearing between husband and wife. (4) Loyalty between friends. (5) Preference to elders.

The same method is pursued in studying this book. It is committed to memory by constant repetition. When it has been thoroughly memorized the third book is taken up. This is also moral law and contains ten volumes. At this time the study of poetry, geography, local and

Asiatic, the four fundamental rules of arithmetic, and the rudiments of government and law begins. The names of the twenty-eight kings of the present dynasty, and the names of the years, which form a cycle of 60 years, are also learned. These studies, however, except the books on moral law, are not compulsory, but are pursued by means of pleasant games peculiar to the Koreans. During the summer famous poems are studied and then committed to memory. In the winter poetic composition receives attention; and great facility is acquired by games.

The study of geography has been somewhat limited, as the Koreans until within a few years have not recognized any world outside of their own and Asiatic counties. They learn from a book the names of the counties and provinces and the most famous mountains and rivers in each province of Korea. This is supplemented by reading the papers issued daily by the government. A person not perfectly familiar with the 400 names of the counties is considered very ignorant of this branch of learning. Asiatic geography is also learned by means of games.

Arithmetic is taught by the abacus, counting-sticks, and many peculiar ways, and the tables through the nines are thoroughly memorized. The abacus is used in business calculations, and counting-sticks are employed by the Koreans in all their higher mathematical calculations.

A book of many volumes of Ancient History of Korea and China is also studied. The rudiments of government and law are taught by means of a chart. This completes the education of the ordinary Korean boy.

HOME SCHOOLS (GUL-BANG).

Nearly every rich Korean supports a school in his own house. He invites to this school the sons of such of his friends as he deems worthy of his liberality and desirable associates for his sons. Only highly educated men are accepted as teachers, who take entire charge of the education of these boys, and also have a general supervision of their characters. They receive a liberal salary, board, and clothes. They are on the same social plane with the family, and the relations between them are of the most friendly character. Often a house is given them for their family, who also share in their generous treatment. The invited pupils, usually the sons of poorer men, receive the same attention as the sons of the family. The early studies are generally the same as those taken at the huk-bang, though much more thoroughly taught.

The branches considered necessary for a liberal education are studied under these men. They are Chinese and Korean classics, with the biography and writings of the most famous authors. Their lives are carefully read and their best works committed to memory. Then follows a book of Confucian doctrines about the size of the Bible, divided into seven books of about fifty volumes.

After this a Book of Ceremonies, which consists of many volumes, con-

taining the rules of etiquette, the parliamentary rules, and the principles upon which these rules depend, as well as a record of the conduct of famous men reduced to a science, and a history of the feudal states which was written by Confucius, and a book of the mental philosophy accepted by the followers of Confucius, based on the principle that man at birth is without sin; and that this purity, retained and enlarged by education, results in the perfect man.

The education of the ordinary gentleman usually ends with this mental philosophy, and any study pursued after this is considered in the line of specialties, and is usually either some one of the sciences or mental philosophy.

CONFUCIAN SEMINARIES.

Another class of schools peculiar to Korea is the Confucian seminaries. These are conducted by the so-called Confucian priests, who claim to regulate their lives solely by the rules of Confucius, as well in dress and manners as in habits of living. Occasionally these priests have left their seclusion and have accepted offices of trust under the Government; but these cases are very rare, although they have been considered "the power behind the throne" during many reigns. At present, although the court claims to be of the followers of Confucius and to respect these priests, they have little political influence.

HIGHER EDUCATION.

Instruction in the sciences and arts forming the higher education of Korea is conducted on a plan similar to other private instruction. There are no buildings especially devoted to these studies, but those interested in some subject form a small class and study under a professor free of tuition. These classes are found in many of the large towns, especially in the capital, Séoul, where it is estimated that several thousand scholars, including the Government officials, are employed. A large proportion of these students are preparing for the Government examinations, and rank higher as scientists than those who study for private purposes. Usually a man devotes himself to one of the following branches, which are the principal subjects of these specialists: Astronomy, geology, mathematics, law (civil and criminal), medicine and surgery, ceremonies (private and official), music, painting, penmanship, or foreign languages (Chinese, Japanese, Manchoorian, and Mongolian). Sanskrit is studied in the Buddhist temples only. The study of these subjects may almost be considered hereditary, families having devoted themselves to one study for generations. They are spoken of as the House of Astronomy, the House of Languages, etc. The children of these families begin the study of the family specialty not later than 15 years of age and usually finish the regular course in three or four years, but often devote the whole life to the study of this one branch of learning.

Astronomy and mathematics are nearly the same in theory as astronomy and mathematics in the western world, but the other branches, which may be considered as a sort of post-graduate study, are very different from the studies bearing the same name. The law practised in Korea was written by an old lawyer four hundred years ago. Much of it was his own theory and the remainder was adopted from a treatise on law written by a lawyer of China. This Chinese law book is well known in China, but is not accepted by the Chinese Government. These law books are called Ta-jun-tong-piün and Ta-miung-youl and consist of about thirty volumes.

MEDICAL SCHOOLS.

The course for medical students includes Tong-ui-bokam, a book of anatomy and physiology; Boncho-kang-mok, a book of materia medica profusely illustrated; and Jě-jung-sin-pien and Kiüng-ak-jün-sü, medical commentaries. The action of the pulse, the color of the tongue, and the examination of the stomach by pressure are considered of the utmost importance in the diagnosis of diseases.

Medicines are divided into four classes: Tang-yak, obtained by boiling the ingredients a long time in water; Chui-ro, distilled medicines; Gow, a kind of thick syrup obtained by boiling, and pills.

Surgeons, besides many books of surgery, carefully study a manikin of copper to assist them in treating certain diseases by means of a silver or copper pin. So proficient do they become in the use of this pin that they can cause instant loss of speech by inserting the pin in a certain place in the hand. They are also familiar with various adhesive plasters and healing washes.

PRIVATE MILITARY SCHOOLS.

There are four kinds of private military schools in Korea: Clubs for bowmen, schools for the cavalry, schools for the foot soldiers, and schools where the students study for the position of line officers and the common soldiers and officers study for promotion.

An old law of Korea calls every man between the ages of 18 or 20 to about 50 to do military service, and, although this law can hardly be said to have been observed for the last two or three centuries, still it has the effect of giving the young men an interest in military affairs. Small military clubs are formed throughout Korea, where rifle practice and the flag service for the common soldiers are studied. Besides the practice with the flags and the drill every soldier must be acquainted with the Chinese words used as passwords. These countersigns are always composed of two Chinese words. One of these words is used in the challenge, the other in the answer. These clubs are supported by private means and are usually taught by officers.

At all the garrisons and at many private places instruction is given by army officers to those desirous of becoming captains. This position

is generally filled by promotion from the ranks, but private citizens may obtain these places.

The Government makes no appropriation for this study, but allows the soldiers to employ their leisure in this pursuit. The course of study includes military science and tactics, the use of forty-eight flags, which indicate the different points of the compass and show to the troops the direction they are to take, besides the use of numerous other flags, which play a very important part in military warfare. Cultivation of the voice is always required, that the orders may be given clearly and distinctly.

Korean cavalry attain a high degree of art, both as riders and in their ability to jump and leap from one horse to another while running. They are able to swing themselves round the body of the horse in order to protect themselves from the bullets or other weapons of the enemy, and they also practice many most complicated feats of horsemanship.

BUDDHIST SEMINARIES.

A traveler in the mountains of Korea will often come upon places which are really villages of Buddhist priests. Temples, schools, and residences of the priests are built near together. The inhabitants, always priests, number several hundred, sometimes a thousand. They include literary men, artists, mechanics, and artisans of all kinds. All the work of the village is done by these priests, from building the temples and decorating them with carvings and paintings to making the clothes and cooking the food. There are two kinds of schools, one for students preparing for the ministry, the other for the ordinary priests. The former requires about three years of education and the latter course depends upon the ability of the student. The course for the ministry includes about 30 volumes of sacred writings by different authors, oratory, cultivation of the voice, memorizing many prayers, and also numerous hymns written in Sanskrit and Korean, together with rules for regulation of the moral conduct of the monks. The ordinary priest must be able to read and write, and know a certain number of prayers and hymns and the rules of morality for the monks. Some of the priests study the sacred dances and music played on the bugle and drum. The artisans and mechanics have no schools, but priests who wish to pursue any of the manual labor necessary for the proper maintenance of the temple receive private instruction from other priests. Only priests or those who have a special religious training are qualified for painting the sacred pictures for the temples.

PUBLIC HIGHER SCHOOLS.

In the thirteenth century, during the Koriŭ dynasty, some attempts were made to establish a kind of public education, but they were of little value.

In 1394, when the present dynasty came to the throne, interest in education received a new impulse and gradually developed a system

which to-day includes three kinds of schools, the *hiang-kio*, the *hak*, and the *seng-giun-gwan*.

These schools are under the supervision of two commissioners; one, who is at the head of the university or "*seng-giun-gwan*," a high official appointed by the King, and another, who is in reality a superintendent of a branch of the treasury department, which has in charge the expenses of all the officers and students belonging to the educational institutions of the country. This commission bears the name of *Yang-hiun-go*, which means "the treasury to support the wise men." It was established by the King in the sixteenth century for the purpose of assisting men of high intellectual attainments and equally high moral character who were not able to earn a living. Although somewhat modified from its original plan, it still has in charge the educational masters of the country. All the students of these public institutions have finished the regular course under private instruction and take up these advanced studies with the intention of devoting their lives to intellectual pursuits.

There are about 400 *hiang-kio*, or one for each county. The students of these colleges are appointed by the superintendent of the college, who is himself appointed by the magistrate of the county. These schools are supported by the county.

There are 5 *hak* in the city of Séoul, one in each ward. The superintendents of these colleges are appointed by the King and the students are appointed by the superintendents.

The school buildings are of the same general style as the public buildings or houses of noblemen. Each school is surrounded by large grounds, with an entrance through a large gate. The walls are of stone, or brick and wood combined, a style peculiar to Korea, and surmounted by a high sloping roof of tiles. The building stands on a high terrace of white stone.

Seng-giun-gwan, the highest college or university in the country, is at Séoul. The students are taken from those who have received the degree of *Dr.*, or *Jin Sa*, and the number is limited to 100, and they have power over all other public schools. This university is in charge of a commissioner appointed by the King.

Seen from an eminence, this university building is little inferior in general appearance to the royal palace. The interior decorations of carving and bright colored ornamentations are similar to those of the palace. These buildings contain many apartments for the students and professors and a temple to Confucius. If the students wish they can live at these colleges all their lives. The Government makes no allowance for the education of the young, but these students are allowed to receive children as pupils at these institutions. The Government also encourages scientific studies by giving rewards at its frequent examinations; but it makes no appropriation for these branches of study.

MUSIC.

The Government has charge of the musical education of the country through a commission, Jang-ak-won, or Academy of Music. The Government musicians number not less than 500 men, including about 200 students. Any vacancy occurring among the professors is filled by selection from the Government employés. The students enter the academy at the age of 10 or 15 years. The course of study takes at least three years, often more. Graduates have no trouble in securing appointments in the Government service. The instruments used are about thirty-five different kinds, consisting of many kinds of drums and string and wind instruments. The employés wear scarlet robes with blue silk belt and a high black hat ornamented with a bouquet. The dress of the students is the same except the hat, which is shaped like a bird and is decorated in bright colors.

Another institution of music is supported by the governor at the palace, where the musicians to the royal family practice daily. This band of 100 men is gorgeous in yellow dress, belted with blue, and a yellow hat trimmed with gold.

The royal military guard at Séoul, composed of seven brigades, has attached to each brigade a musical band of 100 members, and at each military station throughout the country the same number of musicians is employed for each brigade. The municipal governments of the provincial towns and county seats employ from twenty to fifty musicians, paid by local government.

Besides these bands there are numerous private professors and pupils. The Koreans are fond of music and consider it an important feature of every entertainment, public or private.

According to an old law all the blind men in the country must study music in the Academy of Music at Séoul as Government students. At the present time this law is not strictly observed, but although most of the blind prefer to become astrologers, or fortune tellers, the Government still regulates certain rules in the association of the blind.

ROYAL SCHOOLS.

Royal schools are of two kinds. One for the regular education of the princes from childhood to manhood; and one for the King where he must pursue some study regardless of his age. The school for the princes is called "Chun-Bang." It is under the charge of an officer whose rank is equal to that of a cabinet officer. Under him are twelve officers whose positions are considered the most honorable in Korea. The head officer is the real teacher who assigns the lessons for the day and attends to the instruction, while the others are the companions of the princes during study hours.

There is still another great teacher for princes. His position is equal, if not superior, to that of prime minister. He is called "Tai-je-hak,"

which means the great controller of learning. He is concerned not only in the national education, but his duties call upon him to promote the education of the royal family from the King down. Only a man of rare ability can hope to attain this position, and he is held as a kind of Korean Shakspeare. This office was created by a highly educated king of the present dynasty and ever since has received the respect of the King and nation. The first officer holding this position was presented by the King with a valuable ink-stone and other desk utensils of rare workmanship. Each succeeding officer has been honored with their possession. This officer, although not the regular teacher of the prince, examines him from time to time. The opening day of the prince's education is celebrated with much pomp. Tai-je-hak presides on this occasion and plans the whole course of the prince's studies, which is similar to that of other children. The prince selects his own companions in study. As it is not lawful to punish the prince his best loved companion is punished in his stead by standing on a block of wood just big enough to be covered with the feet.

There are two kinds of schools for the king, "Kiŭng yŭn," or classical school, and "So-ta," or historical school. There is no prescribed course or length of term. The studies are pursued only during the winter evenings and at the pleasure of the King. The manner of conducting these evening studies is somewhat like a Chautauqua circle. The sacred classics are discussed by the King, prime minister, and other high officers who are invited by the King to meet in the royal chamber for that purpose. The questions are asked and answered in regular order, the King always beginning.

The So-ta or Historical School is composed of members of the Nagak or royal club, the King's private secretary, Sing-chi, and many other civil officers. The study is pursued in a similar manner to the Kiŭng yŭn. Besides the historical studies these meetings are of a social character.

On these occasions the King's chapel is illuminated with many scores of wax candles and finely decorated. After the reading, music and a banquet follow. The various discussions at these meetings are published in the papers issued every morning by the Government.

There are two other schools held in the palace which can hardly be called royal schools, as no members of the royal family attend except the King, who acts as teacher. The pupils are several hundred civil officers and the sons of high officers. The course of study consists of conversation, and reading and writing in Chinese and Japanese. This school was established about three hundred years ago.

The other school is for the sons of nobles who study the ancient classics and histories. By means of this school the King makes many favorites.

The so-called royal military school is hardly a school or even a club. The King, at the head of from 5,000 to 15,000 men, including civil offi-

cers and soldiers, goes into the field. His position as King entitles him to shoot the first arrow, and the others follow in turn according to the rules. During the spring, on fine days, the King takes a smaller number of men for this exercise in the palace.

The bow, lance, and spear have been until within the last three centuries the only weapons of warfare among the Koreans. Since that time rifles have been used by the military, but the King still practices with the weapon of his ancestors and never makes use of the rifle officially. The old national troops numbered 1,000,000, besides 20,000 more stationed about the capital. One thousand of the palace guard and a certain number of the troops garrisoned about Séoul study military science under the supervision of the King. They practice eighteen different movements with the sword in both hands, and acquire great skill in fencing and athletic exercises.

CIVIL SERVICE EXAMINATIONS.

During the Koriŭ period, or the dynasty last preceding the present one, from the tenth to the fourteenth century, the high officers were selected through the civil service examination. Under the present dynasty not only competent officers are chosen by the examination, but it also influences indirectly all national education. To pass successfully these examinations is the aim of every literary man and is the highest hope of parents for their sons. All the noblemen of Korea have obtained their positions not by inheritance, but by their rank at these examinations. This rank of nobleman is open to everyone, and even servants who by education can pass this ordeal are at once raised, with their wives, to the nobility. Of course the chances are in favor of the sons of the nobility, their surroundings and tastes naturally leading them to strive for the highest places in the gift of the king. There is a story that the most important province of the country, containing 71 counties, was once under the control of a man raised from the lowest ranks through the civil service examination, and that he, as governor of this province, received the highest salary paid by the Government, 240,000 suk of rice per annum (a suk being equal to three bushels). Although this story can hardly be considered authentic, still it is told as showing the disposition of the Government to encourage education.

The Korean civil service examination is not for any particular class of schools, but is a sort of examining board for all kinds of schools.

The clerical force of the Government is not affected by these examinations. The clerks are appointed when very young, and are really trained in their position. After five or ten years of service they become very valuable, and are promoted with increase of salary, retaining their places in the service during good behavior.

There are five classes of examinations, namely: (1) for the selection of high officers; (2) for the degree of doctor; (3) for candidate for the degree of doctor; (4) for scientific officers; (5) for rewards or prizes for

excellence in scholarship. Competitors may not be under 15 years of age, and the descendants of unpardoned high criminals or a father and son of the same family cannot present themselves for examination. The examinations are written and oral, together with recitations. No examination paper without an official seal will be received by the minister of that examination. A strip on which is written the name, age, residence, and name of the father of the applicant is cut nearly across the paper. This is rolled and sealed, that the examiner may not know whose paper he holds.

In Séoul the examinations for the selection "Kwa-ga" are held nearly every month. According to law only those who have taken the degree of doctor are entitled to this examination, but occasionally this privilege is granted to some literary man of especial merit. Once in three years this examination is open to all persons; notice is given one year in advance of the day appointed to accommodate candidates at a distance. The king and the prime ministers are the chief examiners, with many assistants.

At these examinations, called Jŭng-si, and on accession days many curious customs are observed. There are about 50,000 competitors at the Jŭng-si, which takes place in the examination grounds of the palace. This inclosure is covered with grass and has many beautiful trees and ornamental pavilions. For this occasion a large tent is raised near the examination halls, which are occupied by the examiners, including the king, queen, prime ministers, and assistants, during the examination. At 2 o'clock p. m. three or four gates are opened to admit this mass of men, who contend for the first entrance in order to secure desirable places in the tent near to the examination halls. All sorts of tricks are resorted to, and those who have the advantage of money pay large strong men to act for them and hold their places until the struggle subsides, when they take possession. This confusion often lasts into the night, but when settled the grounds become brilliant with thousands of white tents, each lighted by a square lantern suspended from a pole 20 or 30 feet high and bearing the symbol of the family represented, in order to attract the attention of the king and queen.

The next day the presence of royalty attended by the palace guards, with their magnificent silk flags of bright colors, and the host of civil and military officers in full dress add to the already imposing spectacle a degree of splendor seldom seen. At 12 o'clock the musicians play "Yu-min-lak," "Share happiness with the people." After the music the examinations begin.

At the close of the examination the papers are collected by several hundred messengers of the king's private secretary, who deliver them to the king's messengers, who are dressed in scarlet uniform. These men take them to some lower officers, who lay them before the king as he sits with the many examiners. Three hundred police watch the collection of these papers, which are 3 feet in width by 5 feet in length.

They are numbered as they are collected with words of the 1,000 Chinese word book of the children. As before mentioned, the first word in this book is heaven. The first paper is numbered first heaven, the second one is numbered second heaven, and so on to the hundredth heaven. There are nine examination marks—the first of the first, the second of the first, the third of the first, the first of the second, the second of the second, etc., down to the third of the third, in large letters, in red ink.

At the end of the day the crowd scatters and the competitors wait the result of the examination of the papers, which is announced in a few days. From the 50,000 papers not more than 20 have passed as Kwa-ga and about 100 of the other grades. Those whose papers entitle them to the office of Kwa-ga receive their appointment on accession day. During the time which intervenes between the announcement of the successful candidates and their appointment, if they are of high descent, their houses are thronged with guests who call to congratulate them. Among these are the princes, prime minister, and all the high officials. On accession day the recipient of all these honors goes to the palace, where he is welcomed with music, and he receives from the king a garland and his appointment wrapped in red silk. This day is the proudest of his life, and is equaled in importance only by his wedding day. If the successful aspirant has wealth, he uses it most lavishly in making his house, as well as the procession attending him to the palace, as imposing as possible. He is dressed in a pink silk gown fastened with a golden belt, and he wears a black silk hat decorated with red silk. He is mounted on a horse and surrounded by a host of attendants giving the yell "Ok tang tui sori" of the Royal college. The origin of this yell is lost. For three days after accession day the new officer is engaged in returning the calls of his friends.

The examination for the degree of doctor is held once in three years at Séoul. The king appoints several officers to examine the papers, from which are chosen 100 for prose and 100 for poetry. This degree is sometimes conferred upon competitors 60 or 70 years old without examining their papers. The competitors for this degree must bring certificates from the governor of the province. Accession day for the doctor has its proportionate amount of glory, but he receives no garland from the king. During the three days after the accession they wear green silk gowns bordered with black stripes, and high black hats trimmed with bunches of red silk threads. This dress is used only on these occasions. They are no longer plain "Su-bang," "Mr.," but "Jin sa," "Dr.," and are now entitled to attend any civil service examination.

Examinations for the primary selection for the doctor examination is held once in three years at two places in each province. One thousand papers are selected from six different kinds, as follows: Three kinds of poems. The first containing thirty-six lines, every other line rhyming; the second, sixty short lines, every other line rhyming; the third, the

most difficult, rhymes with lines of irregular length. Three kinds of prose: First, criticisms of some famous men; second, commentary on some famous literary work; third, discussion or advice on some moral, religious, or political question.

Examinations for scientific officers are held only at Séoul once in three years. The Government has a commission for each of these branches: Astronomy, geography, literature, mathematics, painting, penmanship, ceremonies, foreign languages, etc.

Examinations for prizes are held only at Séoul for students of science four times in a year, and for students of general literature nearly every month, and anywhere in the 400 counties as the magistrate may appoint. The successful applicants in the scientific course receive as rewards a temporary appointment of from three to six months, or money, rolls of cloth, books, stationery, etc. The prizes for literature are similar. The successful men are given a reception of a social character by the magistrates.

MILITARY SERVICE EXAMINATION.

The examinations for the military service are of many kinds, but the two principal ones are for the selection of officers, and the chief examiners are the king, minister of war, all the generals in active service, and the governors of eight provinces. The competitors are examined in gunnery, archery, horsemanship, tactics and military science, and athletics. The prizes are money, rice, and cloth. Those who have received high marks become officers. The times of these examinations are, like the civil examinations, for officers once in three years, for prizes very often. The accession ceremony for the military is not of equal importance with the civil. The examinations are less crowded as they are held in many places at the same time.

EDUCATION OF WOMEN.

All the women of Korea are educated at home, by their parents or other relatives. Lady teachers are often hired for their instruction, but they are very restricted in their intercourse with their pupils, and they are not allowed to punish them. When 6 or 7 years old little girls begin "Ban-jul," or making syllables with pure Korean alphabet. At the age of 10 they study "Un-gan-nok" (letter-writing), penmanship, multiplication tables, names of years and days, and the history of Korea, "Yul-yu-jun" (biographies of famous women), history of Korea, and ceremonies relating to ancestor worship. They also learn sewing and cooking. The Koreans as a nation excel in cooking, and it is considered an important part of every girl's education. Kuemi is an art to which young ladies pay much attention and great skill is often acquired in it by ladies of rank. This is the art of arranging food on dishes for festal occasions. At all feasts immense dishes of meat, fish, cakes, fruits, etc., are placed on the table. These dishes are often piled

two and three feet high, and the greatest taste is displayed in the arrangement of the different articles of food, producing beautiful effects of color. Jun-kal is also an accomplishment pursued by those ladies hoping for a high social position. It is equivalent to polite letter-writing in America, with the difference that the message is delivered by a servant, who learns it from her mistress. To use the choicest language is the aim of the lady.

The education of girls is usually finished at about 20 years of age. The queen has a special training from the queen dowager. She has a more extended general education and a better knowledge of Chinese than ladies of a lower rank. She also has a thorough knowledge of cookery and sewing. The education of the ladies of the court is similar to that of the queen, and as the aim of each lady is to be private secretary to the queen, special attention is paid to penmanship with almost marvelous results.

Medicine and surgery are sometimes studied by women. There were formerly no schools for women except for the study of medicine, which they were allowed to study under the direction of the physicians to the royal family. Immediately after their graduation they were employed by the Government. At the present time, however, but few women avail themselves of this still existing privilege.

RECENT PROGRESS IN EDUCATION.

A few free schools for the study of English literature and military science have been established by the Korean Government since opening communication with outside countries. The first one was established in 1881 for instruction in military science and the French method of tactics, and hundreds of officers and soldiers were instructed in this school. Since that time the soldiers have used modern rifles instead of the old matchlocks, and they are drilled like modern soldiers. Though this institution was not successful, on account of the revolution which occurred the same year, yet 10,000 of the new Korean troops continue to drill in this method and to use the modern weapons.

Another new school was opened in 1882 for the study of the English language and literature. About fifty students are studying under a few English professors. This school is very successful.

Two years later another school was established for young noblemen of high rank, whose professors are Europeans. The course of study consists of English grammar, reading, mathematics, geography, history, sciences, and writing in English. There are about forty pupils.

About a year later or in 1885 two new schools were opened; one for medicine, the other for military science. The medical school is not quite successful, but the military academy is improving. The superintendent, Gen. Dye, was recommended by President Cleveland to the King of Korea. There are many assistant instructors, most of whom

are Americans, who receive a liberal compensation. The students are young noblemen of high rank in military families.

There was a strong desire among the progressive party to establish the modern system of public schools but their defeat makes this impossible for the present. There are, however, hundreds of reading clubs among the progressive people and by this means much information can be obtained concerning the modern world.

The American and English missionaries do valuable work for the education of the Korean people. Among the half dozen schools of the missionaries there is one for young ladies, fifteen of whom have entered the school every year since 1885.

CHAPTER XII.

EDUCATION IN HAWAII.¹

The census of 1890 gives 12,099 as the population of school age, or 6 to 15, and the per cent attending school as 81.59. The results of educational efforts are seen in the statement that the population over 6 years of age numbers 78,571, of whom 48.85 per cent are able to read and write Hawaiian, English, or some European language. The total population was 89,990, of whom 58,714 were males and 31,276 were females. Attendance is obligatory. The schools are classed as Government common schools, in which only Hawaiian is taught; Government English, in which only English is taught; independent, in which English is the language of instruction. Though these schools are in the main under the auspices of Protestants or Catholics, they are to a considerable extent aided by the Government.

The report of 1892 gives the teachers and pupils as follows:

Class of school.	Teachers.		Total.	Pupils.		Total.
	Male.	Female.		Male.	Female.	
Government common	27	22	29	315	237	552
Government English	107	114	221	3,953	3,195	7,148
Independent	58	84	142	1,655	1,357	3,012
Total	192	200	392	5,923	4,789	10,712

Nationalities of pupils.

Hawaiian	5,353	Chinese	353
Part Hawaiian	1,866	South Sea Islanders	36
American	371	French	5
British	131	Japanese	60
German	197	Other foreigners	16
Portuguese	2,253		
Norwegian	71	Total	10,712

Nationalities of teachers in the Government English and common schools.

Hawaiian	79	Portuguese	5
Part Hawaiian	41	Scandinavian	4
American	77	Belgian	1
British	39		
German	4	Total	250

¹ Prepared by Hon. John Eaton, ex-commissioner of education.

Nationalities of teachers in independent schools.

Hawaiian	14	Belgian	3
Part Hawaiian	6	Chinese	4
American	77	French	9
British	18	Other foreigners	2
German	5		
Portuguese	3	Total	142
Scandinavian	1		

Ages of pupils in all schools.

	Boys.	Girls.	Total.
Pupils under 6 years	154	181	335
Pupils between 6 and 15 years	5,243	4,409	9,652
Pupils above 15 years	504	221	725
Total	5,901	4,811	10,712

There is a marked tendency among the natives to give up the Hawaiian language. Only 552 pupils are in attendance upon those schools in which Hawaiian only is taught. Great reliance therefore is placed on the Government English schools, in which about seven-tenths of the pupils are enrolled. Pupils in attendance upon Government English schools are given by islands as follows:

Islands.	Year.					High school.	Total.
	First.	Second.	Third.	Fourth.	Fifth to eighth.		
Hawaii	936	463	374	170	103	47	2,108
Maui	771	408	350	153	86	37	1,815
Molokai	87	51	30	11	13		192
Oahu	836	491	301	218	152	130	2,128
Kauai	405	233	154	79	34		905
Total	3,035	1,661	1,209	631	388	224	7,148

Naturally it is expected that as soon as the pupils come to use the English language readily they will be able to accomplish more in other subjects of study. Considerable effort is made to advance the qualifications of teachers. Normal classes have been established in one or the schools in Honolulu, in which more than fifty candidates have been taught.

For the country schools an agent has been employed for two years, who personally visits the schools and instructs the teachers in improved methods. The Government has aided educational conventions by paying in part the expenses of the teachers in attendance. Teachers are certificated on examination. First, second, and third class certificates are given. Honorary life diplomas may be given after ten years' successful and satisfactory service. Great efforts are made to improve the schools along the same lines of progress as in America. Music is successfully taught; some attention is given to manual training; the kindergarten is attracting attention. By reference to the statistics it will

be noticed that nearly half of the pupils enrolled are engaged in the first year's work. Special difficulty has been experienced in securing the attendance of Chinese girls. Little has been done in promoting reading among adults by the establishment of libraries. An appropriation of \$1,200 was made for a library in Honolulu. Newspapers have attained a measure of excellence and have considerable circulation. Text-books for the schools are prepared on the American plan, and America furnishes the main supply of literature for English readers.

SCHOOL FINANCES.

The schools are sustained by an appropriation made biennially by the Government, supplemented by moneys raised, collected, and expended in the respective districts. The Government appropriated in 1890 \$190,000. An industrial and reformatory school received an appropriation of \$12,000.

ADMINISTRATION.

The administration of the schools is by law committed to a board of education, composed of five members, whose president makes abiennial report to the legislature. The board employs a secretary to attend to details of office business and keep its records, and an inspector, eminent in pedagogical attainments, to visit the schools and promote their improvement.

Local committees elected by the people in each district have immediate charge of the district schools.

About the schools outside of the administration of the board of education many facts of interest might be noted. The first theological school for the education of Hawaiian pastors was opened in 1863, under the auspices of the Hawaiian Evangelical Association. It reports ten in the regular course and two special students and has accommodation for sixteen. It is supported in part by funds from America.

OAHU COLLEGE.

Oahu College, founded in 1841, by American missionaries for the education of their own sons and daughters, celebrated its jubilee in 1891. It is a chartered institution and managed by a board resident in Hawaii. It is aided by a small endowment fund invested in America under the care of a board located there. It has an annual attendance of over 50 at the college, and over 150 at the preparatory school. The total number of students since its foundation is 966; male, 535; female, 371; living, 779; resident in the Hawaiian Islands, 488. Its course of study may fit for advanced entrances in New England colleges. No other institution has so efficiently promoted the progress of affairs in the Hawaiian Islands. Its largest benefaction, \$65,000, was given by Hon. C. R. Bishop. Gen. S. C. Armstrong, founder of Hampton, fitted here for his advanced entrance at Williams College.

HISTORICAL.

The influence of American missionaries upon education in the Hawaiian Islands is seen not alone in Oahu College. The artisans and traders who preceded them refused to impart a knowledge of their vocations to the natives in fear of losing the profits of their ventures. The missionaries went to give Christianity and all the blessings that follow in its train. Of the first company that sailed from Boston, October 23, 1819, accompanying the two preachers, were two schoolmasters and their wives, and a physician, a farmer, and a printer. They had little to guide them. Kamehameha II was on the throne. They obtained from him permission to reside on the islands and "to teach the people Christianity, literature, and the arts." The King, having a residence near the location of Rev. Asa Thurston, one of the two pioneer missionaries, was reading the English Testament in three months. Five others were reading in Webster's spelling book. The Hawaiian language had not been reduced to writing; this was yet to be accomplished by the missionaries. The King put two of the scholars under instruction that he might judge by personal observation whether education was worth while or not. The head men were among the most eager pupils. It was Charlemagne and the schools of Alcuin repeated. The first schoolhouses were thatched huts like those in which the people lived, with no seats or desks. Teaching was of no very high order, boys of 14 being set to instruct a school where not only children but parents came to be taught. The hours of instruction were from 7 to 9 in the morning and from 3 to 5 in the afternoon. The Hawaiian language began to be reduced to writing, and January 7, 1822, printing commenced.

In 1834 the first newspaper, *The Light of Hawaii*, was issued. Books stimulated the attendance upon instruction. The primitive schools at the time of the highest prosperity reached the number of 900, attended by 52,000 pupils, mostly adults. The chiefs enforced attendance, and declared that no one could hold office or be married who could not read and write. In addition to these rude efforts, special schools were organized by the missionaries in which more thorough work was undertaken. In 1841 the first school law was enacted by the King and chiefs in council. Parents in each village were to elect a school committee that were to act in conjunction with the school agents appointed for each island, over all of whom a superintendent was appointed by the King and council. In 1843 a department of public instruction was organized and placed in charge of a minister of the crown who was a cabinet officer. This position was first occupied by Mr. W. Richards, who at his death in 1847 was succeeded by Mr. R. Armstrong. In 1855 the department was remodeled and its work intrusted to a board of education, whose president was to discharge the duties of the minister of public instruction but who was not to be a member of the cabinet. Mr. R. Armstrong filled this office from 1855 to 1860.

In the early establishment of the system of public instruction, man-

ual labor was made an important part thereof. Pupils were expected to labor two hours a day with their hands. From the first, girls and boys were taken into the mission families and were more or less thoroughly instructed in the ordinary duties and arrangements of domestic life. The missionaries furnished models in all departments of activity. When the first girls' boarding school was opened on July 6, 1837, Miss Brown was the teacher in spinning and weaving. The six or eight young women under her charge made in the first five months about 90 yards of cloth from cotton of Hawaiian growth. The joining of hand work with mind work in Hawaii succeeded very differently from the experiments tried about the same date in the United States.

EDUCATION IN THE CIVILIZED WORLD.

[Blanks indicate that no data are available.]

Countries.	Popula- tion.	Pupils.									
		Total number of youth in schools below universi- ties.	Per cent.	Number in ele- mentary schools.	Per cent.	Num- ber in sec- ondary schools.	Per cent.	Num- ber in higher insti- tutions.	Per cent.	Num- ber in special schools.	Per cent.
IN EUROPE.											
Great Britain and Ireland.....	37,879,285	6,928,032	18	6,406,838	92.1	a236,000	3.6	26,194	0.4	a283,018	4
England and Wales.....	29,001,018	5,344,158	18	4,885,303	91	a206,200	4	17,563	0.3	252,645	4.7
Scotland.....	4,025,647	733,874	18	693,015	93.5	a20,000	2.7	6,645	0.9	b20,859	2.9
Ireland.....	4,704,750	850,000	18	828,520	96.3	a20,000	2.4	1,986	0.2	a9,514	1.1
Prussia.....	29,957,367	6,355,464	21	5,874,390	92	356,912	5.6	17,400	0.3	122,440	2
Bavaria.....	5,594,982	c1,245,202	22	1,187,792	95	41,473	3.5	6,300	0.5	15,997	1
Saxony.....	3,502,684	710,155	20	661,464	93	14,439	2	3,583	0.5	34,252	4.5
Württemberg.....	2,036,522	389,743	19	346,512	88.8	20,594	5	1,426	0.4	22,637	5.8
Baden.....	1,657,867	350,261	21	321,295	91	16,136	4.5	2,659	0.7	12,830	3.8
Switzerland.....	2,917,754	589,794	20	566,900	96	11,120	2	3,076	0.5	10,557	1.5
France.....	38,343,192	6,492,217	17	6,303,462	96.8	181,189	2.8	21,846	0.3	7,566	0.1
Belgium.....	6,069,321	802,175	13	738,673	91.4	28,742	3.6	5,495	0.6	34,760	0.4
Netherlands.....	4,621,744	772,021	16.6	752,890	97	14,596	2	3,254	0.4	d4,535	0.6
Austria.....	23,895,415	3,176,147	13.3	2,938,575	92.1	70,545	2.2	14,274	0.4	167,027	5.3
Hungary.....	17,463,473	2,187,692	12.5	2,074,678	94.8	43,670	2	4,098	0.2	69,344	3
Denmark.....	2,185,335	243,870	11	231,940	94	6,930	2.8	1,820	0.7	5,000	2.5
Norway.....	2,091,000	292,129	14.6	258,548	88	18,581	6	1,537	0.5	a15,090	5.5
Sweden.....	4,802,751	728,591	15	690,628	94.4	15,963	2.2	2,560	0.3	a22,000	3.1
Finland.....	2,338,404	228,918	9.8	222,115	96	4,322	1.6	1,738	0.7	2,481	1.7
Russia.....	97,506,785	2,467,454	2.6	2,233,566	90	223,533	9	19,561	0.7	10,355	0.4
Italy.....	30,347,291	3,065,911	10	2,914,511	95	108,079	3	18,918	0.6	43,321	1.4
Spain.....	17,550,246	1,609,890	9.3	1,552,434	95	31,150	2.3	15,411	1	26,246	1.7
Portugal.....	4,708,178	253,342	5.4	239,814	94.1	6,722	2.6	1,350	0.5	6,806	2.8
Greece.....	2,187,208	234,480	10.7	e223,480	96	6,000	2.5	2,500	1.5	.....	.....
Servia.....	2,161,759	75,533	3.5	69,115	90	f6,418	8.4	g1,067	1.6	.....	.....
Roumania.....	5,509,000	163,816	3	152,819	92.8	10,227	6.2	885	0.5	h770	0.5
Bulgaria.....	3,154,375	269,384	8.2	263,384	.....	.....	.....	202	.....	.....	.....

a Estimated.

b 859 normal school students.

c Too high, owing to duplicate enrollment in elementary and continuation schools. True ratio, 20.

d Incomplete returns.

e 118,480 in primary schools + estimate of Hellenic schools.

f Includes students in technical schools.

g Includes normal schools.

h Normal schools only.

EDUCATION IN THE PACIFIC AREA—(continued)

English											
Country (d)	Popul. 1906.	English popul. 1906.	Per- cent.	Native popul. 1906.	Per- cent.	Non- English popul. 1906.	Per- cent.	Non- English popul. 1906.	Per- cent.	Non- English popul. 1906.	Per- cent.
IN AMERICA.											
United States	91,000,000	10,000,000	11.0	12,000,000	13.2	15,000,000	16.5	15,000,000	16.5	15,000,000	16.5
Canada	5,000,000	1,000,000	20.0	1,000,000	20.0	1,000,000	20.0	1,000,000	20.0	1,000,000	20.0
Central America and the West Indies	10,000,000	1,000,000	10.0	1,000,000	10.0	1,000,000	10.0	1,000,000	10.0	1,000,000	10.0
Caribbean Sea	1,000,000	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0
South America	100,000,000	10,000,000	10.0	10,000,000	10.0	10,000,000	10.0	10,000,000	10.0	10,000,000	10.0
Colombia	3,000,000	300,000	10.0	300,000	10.0	300,000	10.0	300,000	10.0	300,000	10.0
Venezuela	2,000,000	200,000	10.0	200,000	10.0	200,000	10.0	200,000	10.0	200,000	10.0
Guatemala	1,500,000	150,000	10.0	150,000	10.0	150,000	10.0	150,000	10.0	150,000	10.0
El Salvador	1,000,000	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0
Honduras	1,000,000	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0
Paraguay	1,000,000	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0
Uruguay	1,000,000	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0	100,000	10.0
Argentina	10,000,000	1,000,000	10.0	1,000,000	10.0	1,000,000	10.0	1,000,000	10.0	1,000,000	10.0
Chile	5,000,000	500,000	10.0	500,000	10.0	500,000	10.0	500,000	10.0	500,000	10.0
IN AUSTRALIA.											
New South Wales	1,000,000	250,000	25.0	250,000	25.0	250,000	25.0	250,000	25.0	250,000	25.0
Queensland	500,000	125,000	25.0	125,000	25.0	125,000	25.0	125,000	25.0	125,000	25.0
Victoria	1,000,000	250,000	25.0	250,000	25.0	250,000	25.0	250,000	25.0	250,000	25.0
South Australia	500,000	125,000	25.0	125,000	25.0	125,000	25.0	125,000	25.0	125,000	25.0
West Australia	500,000	125,000	25.0	125,000	25.0	125,000	25.0	125,000	25.0	125,000	25.0
Tasmania	200,000	50,000	25.0	50,000	25.0	50,000	25.0	50,000	25.0	50,000	25.0
New Zealand	1,000,000	250,000	25.0	250,000	25.0	250,000	25.0	250,000	25.0	250,000	25.0
IN AFRICA.											
Egypt	6,000,000	200,000	3.3	200,000	3.3	200,000	3.3	200,000	3.3	200,000	3.3
British Posses- sions in Africa, the Mediter- ranean Sea, and Indian Ocean (d)	5,000,000	100,000	2.0	100,000	2.0	100,000	2.0	100,000	2.0	100,000	2.0
IN ASIA.											
India	287,229,431	3,698,300	1.3	3,183,996	83.1	488,926	13.2	5,213	0.1	20,435	0.6
Japan	40,453,461	422,835	1.7	310,836	71.5	10,006	4.4	1,312	0.4	102,855	23.7

a Incomplete returns.

b Military school only.

c Religious seminaries, presumably private, secondary.

d Including Malta, Cyprus, St. Helena, Cape Colony, Natal, Ceylon, Mauritius.

Education in the Civilized World—Continued.

Countries.	Expenditures.										
	Total expenditures for education.	Per capita of population.	Per capita of pupils.	Expenditures for elementary schools.	Per cent.	Expenditures for secondary schools.	Per cent.	Expenditures for higher institutions.	Per cent.	Expenditures for special schools.	Per cent.
IN EUROPE.											
Great Britain and Ireland.....	\$49,957,014	\$1.32	\$7.29								
England and Wales.....	39,148,279	1.35	8.01								
Scotland.....	5,943,425	1.47	8.57								
Ireland.....	4,865,310	1.03	5.87								
Prussia.....	50,702,200	1.86	8.47	\$37,342,914	74	\$6,637,343	14	\$3,767,897	8	\$2,654,046	4
Bavaria.....	5,462,979	1.00	5.00	3,742,233	69						
Saxony.....	6,973,526	1.99	9.82	4,758,959	69	993,733	14	418,661	6	802,167	11
Württemberg.....	3,344,946	1.64	8.58	2,383,431	71	650,000	20		311,515		9
Baden.....	(?)	(?)	(?)								
Switzerland.....	6,339,200	2.17	10.72	4,778,275	76	726,343	11	514,820	8	339,758	5
France (a).....	34,584,295	0.81	5.31	25,223,645	73	3,850,400	11	3,065,718	9	62,445,162	7
Belgium.....	5,779,735	0.95	9.38	2,151,860	63.3	2756,285	23.3	2337,080	10.4		
Netherlands.....	5,878,115	1.27	7.58								
Austria.....	28,307,774	20.35	22.64								
Hungary.....	5,396,799	0.31	2.46								
Denmark.....		(?)	(?)			192,944		193,795		149,210	
Norway.....	2,121,949	1.06	7.26	1,399,707	66.1	472,149	22.2	144,001	6.7	103,092	5
Sweden.....		(?)	(?)	3,479,966							
Finland.....		(?)	(?)	2282,590		2319,338		198,911			
Russia.....	26,044,329	0.26	15.00								
Italy.....		(?)	(?)	11,921,405							
Spain.....											
Portugal.....	1,885,146	0.40	9.78								
Greece.....	1,083,625	0.52	4.57	504,625		579,000					
Servia.....	713,965	0.34	9.32	461,218	65	198,459	28	51,288	7		
Roumania.....	3,601,593	0.66	21.47								
Bulgaria.....		(?)	(?)								
IN AMERICA.											
United States.....		2.28	11.27	For common schools, \$143,110,218.							
Canada.....	8,521,712	1.76	8.36								
Other British Possessions in America.....	629,036	0.35	2.91								
Mexico.....	4,494,836	0.40	10.36								
Guatemala.....	584,144	0.36	9.50								
Costa Rica.....	334,719	1.37	18.55								
Nicaragua.....		(?)	(?)								
San Salvador.....		(?)	(?)								
U. S. of Colombia.....	668,725	0.17	7.04								
Venezuela.....	645,723	0.28	6.00								
Ecuador.....	594,701	0.47	8.00								
Peru.....	303,581	0.12	4.02								
Bolivia.....	26,900	0.01	0.96								
Brazil.....	5,217,539	0.37	17.10								
Paraguay.....	314,615	0.95	20.27								
Uruguay.....	656,835	0.95	9.29								
Argentine Republic.....	10,415,789	2.55	38.51								
Chile.....	7,000,000	2.44	55.00								
IN AUSTRALIA.											
New South Wales.....	3,847,826	3.40	18.65								
Queensland.....	1,211,374	3.07	17.66	1,090,586	90.	97,708	8			23,679	2
Victoria.....	3,921,852	3.53	14.42	3,616,419	92.2	49,867	1.3	193,066	4.9	62,500	1.6
South Australia.....	464,154	1.45	6.18								
West Australia.....	41,322	0.83	7.72								
Tasmania.....	193,468	1.32	7.90								
New Zealand.....	2,059,610	3.28	27.00	1,829,457	88.						
IN AFRICA.											
Egypt.....		(?)	(?)								
British Possessions in Africa, the Mediterranean Sea, and Indian Ocean.....	1,354,995	0.26	4.22								
IN ASIA.											
India.....	993,690	0.003	0.27								
Japan.....	9,089,259	0.22	20.94	7,357,679	80.9	297,458	3.2	454,236	5	979,886	10.9

a From State only.

b For administration and miscellaneous purposes.

c State appropriations only.

d For day schools only; not for ambulatory schools.

e Means revenues.

f Depreciated paper money.

ELEMENTARY EDUCATION IN THE CIVILIZED WORLD.

1. IN EUROPE.

The population of European countries (*i. e.*, Great Britain and Ireland, France, Belgium, Netherlands, Switzerland, Prussia, Bavaria, Saxony, Württemberg, Baden, Austria, Hungary, Denmark, Norway and Sweden, Russia, Roumania, Servia, Bulgaria, Greece, Italy, Spain, and Portugal)¹ is found to be 366,044,532, according to census and reliable estimates.

The number of pupils in elementary schools in the same countries is found to be 37,014,708, or 10.11 per cent of the population.

But since the difference between the educational activity of western, northern, and central Europe on the one hand, and southern and eastern Europe on the other, is very marked, it would seem proper to group the countries in the foregoing lists as follows:

<i>Western, Northern, and Central Europe.</i>	<i>Southern and Eastern Europe.</i>
Great Britain and Ireland, France, Belgium, Netherlands, Switzerland, Prussia, Bavaria, Saxony, Württemberg, Baden, Austria, Hungary, Denmark, Sweden and Norway. Population, 202,928,690. Pupils in elementary schools, 29,354,575, or 14.5 per cent.	Portugal, Spain, Italy, Greece, Bulgaria, Servia, Roumania, and Russia. Population, 163,115,842. Pupils in elementary schools, 7,660,123, or 4.7 per cent.

If we take the percentage (14.5) of the first group as a standard for entire Europe, there ought to be in elementary schools 16,061,749 more children than at present, to-wit: 53,076,457 instead of 37,014,708.

If we apply the percentage found in countries farthest advanced, Germany and Switzerland (to-wit: 18 per cent), to entire Europe, the number of children not in school, who ought to be, is found to be 28,873,295; namely, 65,388,003 in school instead of 37,014,708.

2. IN PAN-AMERICA.

The population of the American continents together is 117,790,641. It is found that there are 16,792,275 pupils in the elementary schools, or 14.3 per cent. But separating, for the sake of comparison, the countries of the two continents into two groups, United States and Canada on the one hand, and all of Spanish America on the other, we get the following results:

<i>United States and Canada:</i>		<i>Spanish America:</i>	
Population	67,454,929	Population	50,334,712
Pupils in schools	14,966,150	Pupils in schools	1,826,125
or 22 per cent.		or 3.8 per cent.	

¹ No school statistics available from Turkey and a few principalities in Germany.

Applying the percentage found in the United States, The American ought to have 9,121,700 pupils in schools in 1904, or, namely, 2,583,944 instead of 1,677,756. However, the percentage in the Prussian States with the exception of the army districts, namely, of children above 10 years, and of female schools, however, could not be applied to the Prussian States, because in Germany, where child compulsory attendance has been introduced for nearly a century, i. e., 18 per cent is the average percentage. Applying that to the Prussian (instead of 22 per cent) we find the states should have 1,677,756 instead of 2,100,412 (total Prussian) in 1904.

3. IN AFRICA.

Applying 15 to New South Wales, Queensland, Victoria, South Australia, West Australia, Transvaal, Natal, Rhodesia, a population of 2,000,000 and 515,360 pupils in elementary schools, or 18.8 per cent. Applying the German and Swiss standard of 18 per cent, Australia would have 3,600,000 pupils. Applying the United States standard of 22 per cent, Australia ought to have 839,350 pupils in elementary schools.

4. IN AFRICA.

Egypt and the British Possessions in Africa, in the Mediterranean, and the Indian Ocean have 11,894,523 inhabitants and 519,321 pupils in elementary schools, or 4.4 per cent. Applying the German standard of 18 per cent, we find these countries should have 2,141,013, or 1,621,792 more pupils than there are enrolled in school. If we apply the United States standard of 22 per cent, which we know to be exorbitant, there should be 2,607,473 more pupils than there are attending school.

5. IN ASIA.

India and Japan, the only countries from which we have reliable data, have a population of 327,623,892, and only 3,499,882, or about 1 per cent, attending elementary schools. If we apply the German standard of 18 per cent, we find the discrepancy in the number of pupils to be 54,981,958. Applying the United States standard of 22 per cent, the discrepancy would be 58,589,034.

SUMMARY.

All the countries named have a population of 827,216,484, and report 58,542,073 pupils attending elementary schools, or about 7 per cent. If we apply the German per centage of 18 per cent, the discrepancy in the number of pupils is found to be 90,356,866 (that is, 148,898,959 instead of 58,542,075). If we apply the United States percentage of 22 per cent, the number of pupils withheld from school is found to be 3 per cent greater; namely, 123,445,553.

CHAPTER XIII.

LEGAL EDUCATION IN THE UNITED STATES.¹

I.—REPORT OF THE COMMITTEE ON LEGAL EDUCATION.

[Submitted at Saratoga, N. Y., August 24, 1892.]

To the American Bar Association:

At the last meeting of the association (1891) the following resolution was passed:

That the further consideration of a proper course of study for American law schools be recommitted to the standing committee on legal education for the ensuing year, when they shall be appointed, with the request that (after a careful examination of the valuable material with reference to such systems in other countries, now or hereafter to be gathered by the Bureau of Education, in response to the question formulated by the committee of the year now closing) they report upon the same at or before the meeting of 1892.

The committee have been in constant communication with the Bureau of Education since their last report, but they regret to say that it has been found impracticable to put the foreign material referred to in the resolution in a form to be presented to the association at this meeting.

¹ Chapters XIII, XIV, XV, and XVI constitute a Report on Legal Education in the United States and Foreign Countries, of which an edition of 5,500 has been printed as *advance sheets*; also a special edition of 5,500 ordered by the Senate for its own use. The following letter explaining the circumstances of its preparation accompanied the report in its separate form:

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, November 2, 1892.

SIR: I have the honor to forward for publication a report upon legal education in the United States, in Europe, and in other parts of the world. It consists mainly of statements showing what is taught and what methods of instruction are pursued in the leading law schools of the various countries, and offers the latest statistics available. This information has been collected by the Bureau of Education within the last two years, at the request of the committee on legal education of the American Bar Association, which has undertaken an investigation of the courses and methods of instruction in the law prevailing in this and other countries. The report presented by this committee to the association in 1892 is embodied in the present document as a suitable introduction to the facts collected and set forth. The membership of this committee during the three years of its existence has been as follows:

In 1890.—William G. Hammond, St. Louis; George M. Sharp, Baltimore, and Henry Wade Rogers, Evanston, Ill.

In 1891.—William G. Hammond, Henry Wade Rogers, George M. Sharp, George O. Shattuck, Boston, and J. Hubley Ashton, Washington.

Large accessions have been made since the meeting of 1891 at Boston, but there are a considerable number of places yet to be heard from and other important gaps are to be filled before an intelligent view of the whole subject can be presented. Arrangements have been made with Dr. Harris, the Commissioner of Education, whereby a report in some detail on the subject will be prepared by the Bureau and the committee acting in coöperation, with such explanations as may be necessary to those not familiar with the terminology of legal education in foreign countries. This will appear in the Commissioner's next report, to be published in December. The committee regret that they are obliged to refer to this report for a detailed account of foreign systems. They are confident that such an account of the experience of many countries in legal education will give much instructive information to those interested in the subject in the United States. The general conclusions of the committee from the matter referred to will be hereinafter stated.

Before entering upon the consideration of a proper course of study for American law schools, the committee thought it desirable to learn the present condition of legal education in the United States and the views of leading educators on the subject. To this end they addressed

In 1892.—Same as in 1891. For 1893 Mr. Shattuck has been succeeded by Samuel Williston, Cambridge, Mass.

The compilation of the present document has been made with great care and industry by Dr. L. R. Klemm, specialist of this Bureau in foreign educational systems, who has thoroughly edited and arranged the material received and made several important original contributions thereto. The matter relating to law schools, colleges, and the common schools in the United States has been extracted from catalogues and reports in a painstaking and judicious manner by Mr. Wellford Addis, Mr. Lewis A. Kalbach, and Mr. James C. Boykin; that relating to Spanish America by Miss Frances G. French, and that relating to Canada and Australia by Mr. Eugene B. Lacy, all of this Bureau. Mr. Sharp, of the committee, has furnished constant assistance and wise suggestions. The chief clerk of the Bureau, Mr. John W. Holcombe, conducted most of the correspondence connected with this work, has supervised its preparation, and taken charge of the revision of the proofs.

Additional information, criticism, and the correction of errors are solicited from any readers, and will be gratefully received.

The desire of the American Bar Association, in inaugurating the investigations which have been carried on as above described, was to further the improvement in quality and methods of instruction furnished to students of the law in this country. It has given me great satisfaction to coöperate with the committee in their work, and I am now gratified to offer, through you, to the public and particularly to the legal profession, the result of the joint labors of the committee and the Bureau of Education.

I am, sir, very respectfully, your obedient servant,

W. T. HARRIS,
Commissioner.

Hon. JOHN W. NOBLE,
Secretary of the Interior.

and by the possession of reputation in connection with past fighting virtue. The committee desire to acknowledge their indebtedness to many of the gentlemen responsible for the information given to them, and to the Government of Mysore for the facilities afforded them.

The members of the committee have already visited the law schools of the Madras Presidency and in the United Provinces. In the course of their journey on pages 17, 18, 19, and 20 will be found some statistics regarding the number of students and professors in each of the schools. The committee have not thought it necessary to prepare tables giving the number of students for each of the schools, as this will appear in the annual reports of the Universities of Madras and Bombay. But they would say that there were in the Madras Presidency 1901-02 about 6000 students. It will be noticed that this year for the first time there was an increase in the number of students attending the schools in the last three years. The total attendance at all the schools in the country in the academic year 1898-99 was 4308, showing an increase of nearly 50 per cent. in that time. An examination of Table No. 1 of Appendix B, annexed to the report of last year, will show that there has been a greater increase in the past three years than there had been in the previous ten.

The information of the committee regarding legal education is confined to the law schools; they have no means of ascertaining the number of students who are pursuing their studies in offices, or the course of study pursued by them. The law schools certainly present the best side of legal education in the country.

The information of the committee relating to the schools is derived from catalogues of the schools, the replies to the committee's letter, and the personal observation of the members of the committee.

The information contained in the catalogues is in general somewhat indefinite, but certain results are clear. No standard course of study or method of instruction exists. In fact, it can not be said that exactly the same course of study or method of instruction prevails in any two schools.

It is evident that the course of study in the schools is, with a very few exceptions, confined to the branches of practical private law which a student finds of use in the first years of his practice. It is the technical rather than the scientific or philosophic view of law which is taught.

Thus we find that the subjects of contracts, with its branches of agency, suretyship, insurance, bills and notes, partnership, etc., torts, real and personal property, conveyancing, corporations, bailments, wills and the administration of estates, mercantile law, domestic relations, common-law pleading and practice, evidence, equity jurisprudence and procedure, are taught in all the schools. It is superfluous to remark that a course of study omitting any of them would be imperfect. Some attention appears to be given certain special subjects, as

¹ See statistics on p. 432.

The course of study in the schools of the country will be shown in tables annexed to the next report of the Bureau of Education. This table, together with the table relating to the courses of study in foreign countries, can be printed and distributed by this association if it is desired.

The methods of instruction do not admit of exact classification, but the committee, for convenience, adopt that frequently used, viz, recitations from text-books, lectures, and the "case system."

1. *Recitations from text-books.*—In this system a certain number of pages of a text-book are assigned the student, upon which he is exam-

ined the following day. This appears to be the foundation of instruction in a large majority of the schools, though it is used in very few, not more than four or five, as the sole method of instruction, being generally combined with lectures and the reading of cases. In some schools the recitation is supplemented by a lecture on the subject of the lesson, by the instructor, who comments on, explains, and amplifies the text. In many of the schools a colloquy or discussion by the students, directed by the professor, is practiced as a part of the exercise, in which the students analyze the subject, compare the authorities, and criticise the author, etc., and in some this is the principal method of instruction. In a large number of schools, cases illustrating the text selected from the notes or from recent decisions are referred to the students, and a recitation in some form upon them is required. In general, cases are said to be used to illustrate a principle or show its historical development.

2. *Lectures.*—Instruction by means of lectures only is adopted in very few schools, though this appears to be the only method of instruction in a few schools (four or five), but is used to a considerable extent in connection with recitations from text-books in nearly all. Students are usually examined on the lecture the following day. In some schools the lectures are accompanied by a collateral course of reading from text-books and reports, and in some a colloquy follows the lecture. A large majority of schools use the system of recitations from text-books combined with the lectures, students being examined on the text of the book and the lectures. In a few schools special lectures are given, intended to amplify the course of instruction on particular topics, and apply in a more detailed way than is practicable in the recitations of the class room those general principles the students have learned from the text-books. Such lectures are generally on practice in the United States courts, admiralty, patents, insurance, corporations, and railroads.

In a number of the schools students are required to take notes of the lectures, which must be exhibited to the faculty; in some cases they are required to read their notes to the class. In a few schools full notes of the lectures given is a condition of graduation.

The committee would say that, so far as any mode of instruction can be said to prevail, it is founded primarily on the lesson in the text-books, with a lecture or explanatory remarks by the professor, the reading of a certain number of cases by the student, and a recitation or colloquy.

In some schools the lecture system is used entirely for some subjects and recitations from text-books for others.

3. *The case system.*—This is defined by Prof. Keener in his article in the Yale Law Journal, Vol. I, p. 144, as follows:

The case system consists of putting into the hands of the student a number of cases on any given subject, taken not at haphazard, but selected by the professor with a view to developing the law on that subject.

It must be borne in mind that this method of teaching does not consist in lectures by the instructor, with reference to cases in support of the proposition stated by him. The exercises in the lecture room consist in a statement and discussion by the students of the cases studied by them in advance. This discussion is under the direction of the instructor, who makes such suggestions and expresses such opinions as seem necessary. The student is required to analyze each case, discriminating between the relevant and the irrelevant, between the actual and possible grounds of decision. And having thus discussed the case, he is prepared and required to deal with it in its relation to other cases.

It is apparent from what has been said that the essential idea in this system is the exclusive use of cases in teaching law. The colloquy or discussion of cases described by Professor Keener is common to all systems of instruction, and is practiced to a great extent in connection with text-books and lectures.

The study of cases is also general, being the practice in nearly all the schools, but it is generally said in connection with the study of cases that the purpose is to illustrate principles, to familiarize the student with the leading cases, and train the mind in analysis. But cases are not in other systems the sole method of instruction.

It is argued in favor of this system that "the theory on which this proceeds is that it is only by regarding law as a science that one can justify its being taught in a university, and, regarding it as a science, the student should not only be encouraged to investigate the law in its original sources, but should be distinctly discouraged from regarding as law what is in fact simply the conclusions of writers, whose opinions are based upon the material to which the student can be given access." (Page 144.)

"The case system, then, proceeds on the theory that law is a science, and as a science should be studied in the original sources, and that the original sources are the adjudged cases, and not the opinions of text writers, based upon the adjudged cases. But the law is an applied science, and therefore, to appreciate thoroughly the principle involved in a given topic, the student should deal with it in its application, and as he learns these principles in their application they are not a mere abstraction, but have assumed to him a concrete form, and he is prepared to apply them in mastering new problems. Instead of reading about principles, he is studying and investigating the principles themselves. Under this system the student is taught to look upon law as a science consisting of a body of principles to be found in the adjudged cases, the cases being to him what the specimen is to the mineralogist. It should be remembered that the student is not simply given the specimen and asked to find out as best he can what it is, but each specimen is accompanied by an elaborate explanation and classification. In comparing the system of teaching by cases with the ordinary text-book system it should not be forgotten that the decision of the court is not simply a judgment for the plaintiff or for the defendant upon a given statement of facts, but that the reasons therefor are given at length,

1890. The committee on the study of the law in American law schools.

On the subject of the study of the law in American law schools, the committee on the study of the law in American law schools.

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The committee on the study of the law in American law schools.

Prizes are given in about half the schools. They consist of money, varying in amounts from \$100 to \$500, gold medals, and medals. The prizes are usually awarded for the best thesis for the best examinations, in essays or junior year best orations, excellence in debate, etc. A few law scholarships in law used to be awarded to deserving students, but this is very unusual in the schools.

The committee think that so far as the subjects of private law referred to are concerned, the course of study in most of the schools is adequate and the instruction sufficient. They avoid any reference to particular schools because much must be left, in any case, to the judgment of the authorities of the school. They are influenced by many considerations unknown to the committee. The laws of their State, the sentiment of the locality, the class of students who attend the schools, and other things may render impracticable in one community what would be easy in another. But it may be said of them all that the instruction is too technical. It is not elementary enough. As has already been said, the view of law presented to the student is technical rather than scientific or philosophical.

In considering the subject of a course of study in American law schools, the committee are embarrassed by the fact that a longer course than two years is impracticable for the greater number of schools. The competition of life is growing stronger all the time, and is urging young men into active, breadwinning occupations early in life. The youth of America, as a rule, wish to be independent. The sentiment of the profession and the public will not sustain, at least in some parts of the country, a longer course than two years, and even this is impracticable in some places.

And yet it will take a student at least two years under present methods to acquire a competent knowledge of the subjects of private law referred to to fit him for practice. There is little time he can devote to public law, the history and theory of the law, and the science of government, unless our methods of instruction are so improved as to save the time now given to the mere memorizing of practical rules and points of law, of no real service to the beginner, and to employ it on these topics, indispensable in a true system of legal education.

The importance of well-trained lawyers is greater now than at any time in history. The law has become so complex and extensive with the multitude of decisions and statutes that a higher training is indispensable. A publishing company in a late advertisement offers to the bar full reports of 75,000 cases decided in the courts of the United States (State and national) since January 1, 1887. The difference between the law of to-day and that of fifty years ago may be illustrated by an observation of Prof. E. J. Phelps in a recent article on education: "It is easy to find single opinions in which more authorities are cited than were mentioned by Marshall in the whole thirty years of his unexampled judicial life, and briefs that contain more cases than Webster referred to in all the arguments he ever delivered."

A system of law which accepts all the cases on a given subject as authority is possible only with a thorough knowledge of the elementary principles of the law on the part of the lawyers and judges. These, with a proper classification and scientific method, have become indispensable.

Again, it must be remembered that the lawyers fill a large proportion of our offices, State and national, and their influence is most potent in political affairs.

The mind of the lawyer is the essential part of the machinery of justice; no progress or reforms can be made until the lawyers are ready. Their influence at the bar, on the bench, and in legislation is practically omnipotent. The progress of the law means the progress of the lawyer, not of a few talented men who are on the outposts of legal thought, but the great army of the commonplace who constitute the majority in every occupation. What the lawyers do not understand, or what they pronounce visionary and impracticable, will not be accepted by the legislatures or courts of the country. It is conceded that the development of the higher jurisprudence has become essential to the continuance of the system, inasmuch as the railroads, telegraph, and ocean racers have brought countries into close communication which a century ago were distant and hardly known, when commerce is extended all over the globe and our citizens are called for business and pleasure to the most distant countries, where they purchase property, incur obligations, or acquire rights. It is not enough that an American lawyer shall now know the decisions and statutes of his own State, or even of his own country, to which the course of study is now for the most part confined.

Yet, recognizing the fact that a course of more than two years is impracticable for most, the committee recommend—

1. That for those to whom a longer course of study is possible, provision be made in the schools for post-graduate courses, where the subjects of general jurisprudence and public law shall be taught.

2. A system of electives, now found necessary in almost every branch of education by reason of the extent of human learning, and already existing in several of the schools, in which students shall be required, in addition to the usual course in private law already described, to pursue at least a certain number of subjects in public law, international law, the history and theory of the law, comparative jurisprudence, and the science of government.

3. Better preliminary training, if practicable. A large proportion of the schools require no entrance examination, and in none of them is the entrance examination equivalent to that of the A. B. degree in any reputable college in the country. It may not be foreign to the subjects of this report that a knowledge of law is important to every citizen of the country, whether he is engaged in private business or public life. The committee think the knowledge of the institutes and general principles of the law would be an advantage to every citizen; in fact, that it is now a part of general education, and that a course of law should be a part of the senior-year studies in colleges. In a Government like ours, where the people rule, and where so many aspire to, and some attain, public office, a knowledge of our form of Government, State and national, and of the institutes and general principles of the law is necessary, and the committee think in the public schools of the country some instruction should be given in the form and principles of our Government and in the elementary principles of the law.

The law schools of the country are in good hands. As a rule, the instructors are lawyers engaged in active practice. Most of them are men of the best position at the bar of their respective communities; many of them are men of national and international distinction. There are a great many judges, State and national, including three judges of the Supreme Court of the United States, engaged in teaching. The committee believe the law teachers of the country are sincerely and earnestly devoted to their work and will welcome and aid all efforts to improve legal education and elevate their profession.

In this connection it will be instructive to study the efforts of the present and last generations of *English lawyers*, in both branches of the profession, to improve legal education in the mother country alike of our blood and our law. Those efforts have shown a general professional interest on the subject during the last fifty years which has not been felt in the United States, but is worthy of imitation here. They show also an intelligent comprehension of the true methods of such improvement and a constantly growing perception of the right means to attain it, which can not be too carefully studied by American teachers

of law. A full and clear account of these efforts and the results thus far obtained in England has been prepared for the committee by one of its members (J. Hubley Ashton, esq., of Washington, D. C.), and will be found in the Appendix, to which the attention of the members of the association is respectfully directed.

The most instructive lesson to be derived from the continental European schools will not be found in their present methods alone or in any of those formerly employed during the eight hundred years which have elapsed since the revival of scientific law. It lies rather in the history of the gradual development of a method really adapted to school instruction, for such instruction necessarily implies a scientific method. Individuals may pick up the methods of any art or practice by mere observation of what is done before them, or by constant repetition, until the process has become familiar, as the apprentice learns his trade. But when a class of students are brought together, even to learn the theory of a mere mechanical operation, still more that of a system like law, under the direction of a teacher, the entire course of teaching must depend upon the order in which the truths are presented. This method differs somewhat in every science; but there is none deserving the name which can be taught by simply writing down its results in a book and giving them to the learner to be committed to memory, still less by repeating them to him. The use of such books is indeed often defended by lawyers on the ground that it is an advantage for students to become familiar with the same books they will use as practitioners. If true, this is only true in the sense in which the apprentice should learn as early as possible the mere tools of his trade. But it overlooks entirely the difference between the education of the brain and that of the eye or the hand. Even in the study of arithmetic or grammar the child must familiarize himself with general notions and principles before he can make much use of examples, or understand their processes and results. The entire time spent in the study of the law is too brief and precious to be wasted in merely committing to memory what the learner can find in the books as he wants it. The beginner must first master that knowledge which is to be carried always in his mind to enable him to understand the legal force of the decided points as he reads them, and to draw from a case all the inferences that will be necessary to make it applicable to other cases not yet decided. These things can not be taken from the books as wanted; but the more of them he has in his mind the more help he will find in the books when he comes to them.

At the same time, it must be remembered that the more purely abstract a science is, the easier it may be put in a form of words. But the practical sciences, those that are arts as well, like the law, require exercise of the mind in practical processes before their truths can be appreciated. To prepare a youth for the work of the lawyer by exercise of the memory alone is as much as if one should attempt to train a

pianist in the same way. It follows that the law can not be taught by merely giving to the student the form of words in which its rules are expressed for the direction of the courts, where such a form exists; still less in giving him the mere form of words in which the courts have enunciated their decisions of particular questions. In neither form is the science of law so expressed as to be readily assimilated by the mind of beginners. They require a knowledge of the topics with which the law deals, not merely in concrete form, but as reduced to a scientific classification affording terms of definite and consistent meaning, without which no general truth can be expressed. Indeed, there is no law for concrete cases, as there is no reasoning concerning singulars. All the certainty of the law consists in the general terms in which its truths are expressed.

No better illustration of this truth can be given than is afforded by the experience of the earliest modern law schools. Irnerius and his followers found themselves in possession of the grandest body of written laws ever yet in the possession of mankind, the body of civil law bequeathed by Rome to posterity. Naturally they assumed that the student needed only to know and remember the language of the civil law, with only such casual explanation as the novelty of some words might require. It soon became apparent, however, that these glosses were too numerous and too various to be carried in any mind by mere dint of memory and made of practical use when occasion called. The separate explanations soon grew into a science of interpretation, according to their effect upon the words of the text, by which the student or the practitioner could frame new interpretations as the case might require. All law being in their eyes the command of the emperor, this interpretation was the only mode in which its language could be adapted to the immense variety of actual questions arising in courts of justice, and therefore the science of interpretation was the science of law itself so far as the student or practitioner was concerned.

We may digress here for a moment to point out the important influence on English law of its lack of any written code like that of the Romans. With all the influence exerted by that code in England for a century and a half or two centuries after Vacarius, no part of it was ever accepted as an authoritative text in the island. Its authority was purely scientific and not legislative; and hence there could properly be no interpretation where there was no text to be interpreted.

Glanvil asserted the entire absence of written law when Vacarius was but lately dead if not still living; and Fleta followed him in the same assertion when the Roman law was in a rapid decline, more than a century later. To see how great a difference this makes and how largely it may account for that decline of Roman law which is a singular feature of our English experience, we need only to note the entire absence of the doctrine of interpretation from the early law of England, as we may easily do by comparing the text of Bracton with

that of the civilians from whom he borrows so much, and especially with Azo.

On the continent the acceptance of the entire text of the *corpus juris civilis* (with very trifling exceptions) as authoritative law, and the imposition thereon of a vast science of interpretation in the shape of glosses, comments, and finally of entire treatises, in time made the body of law so immense that the student could master it only imperfectly, and even the judge or practitioner was confused rather than enlightened by the amount of his reading. The practical consequence was that which must always result when a system of laws becomes too large or too verbosely expressed to be mastered as a harmonious whole, or applied as a consistent system in the decision of every case. Doubts and contradictions multiplied until there was hardly a practical question upon which the authorities did not conflict. The most honest judge was reduced to the poor expedient of counting the authorities for and against a proposed ruling, and following the majority instead of deducing a result from the fundamental principles of the law. Attempts to abridge or systematize the authorities only added to their bulk, so long as the false theory of accepting every word of the written text and every opinion of a commentator or interpreter as a part of the law continued. It was not until the great jurists of the sixteenth century saw the necessity of looking beneath this immense and shapeless mass of words for the few and comparatively simple principles in which the reason of the laws consisted that the way was open to improvement. The great historian of the Roman law in the middle ages has given us a most appreciative yet critical and just account of the condition of legal science from its revival to its lowest subsequent stage, three centuries later. (Savigny, History of the Roman Law in the Middle Ages; see especially Vol. III, chap. 28; Vol. V, chap. 41; and Vol. VI, chaps. 47 and 60.)

He has, indeed, fully appreciated the value of the glossators' services to the science while they were at work upon the text of the law and attempting to construct a systematic body of principles from it. He says justly that in this labor of construction a theory of law was evolved for the first time, at least since the classic age of Roman jurisprudence, and the beginning was made of that distinction between theory and practice which has been recognized ever since, a distinction, as he justly says, of benefit or of injury to the science as it is rightly or wrongly treated. (Vol. IV, p. 224.)

He then shows the change that came over their methods about the time when their labors were closed and their results were digested in the Accursion gloss; the elevation of that gloss to the rank of an authority even superior to the text, and the mere copying of former opinions in place of active thought in the elimination of principles. Writers were content to repeat the language of their predecessors and to follow the common opinion of the greater number without attempting to find the

reason of the law and the decision of the doubt in conformity with the principle. He also points out the instructive fact that this decline first appeared in the books written for practicing lawyers, which became mere compilations of points and dicta while a truer method of discussion still lingered in the schools. These books, by their verbosity, and by efforts to give an opinion upon every practical point, show that they were intended to content mere readers who sought to make a mechanical use of them without any expenditure of thought; a trait which has come down in lineal succession directly to the treatises and practical works of the present day.

Even the schools soon fell into a traditional method which no one dared to break over, and would have sunk into the merest formalism, destitute of all real life and activity, but for the presence in them of a few men who were not mere lecturers, but took an active part in contemporary life and business. These wrote *Consilia*, or opinions in actual cases, public and private, which are the characteristic books of the period, and by their constant reference to the actual relations and interests of men saved the schools from the deadening influence that then controlled them. This breath of real life could not by itself reform the absurd methods, then in use, but it imparted life enough to make them susceptible to the quickening efforts of the following century. Among the best of these writers are Cinus and Bartolus, who spent most of their early manhood in actual practice, and Bella Pertica and Lucas De Penna, who never sat in a teacher's chair. The latter's book is pronounced by Savigny freer from the defects of the school method than any other of his time. (Savigny, Vol. VI, pp. 1-21.)

But perhaps the most striking illustration of this aid to the schools from without (though not mentioned by Savigny because not coming within the limits of his subject) is the remarkable book of Conrad Lagus, a German writer, who in the sixteenth century wrote the first book for students that attempted to cut loose from the accepted methods, and to deliver the science of law to the student in the form in which it would find most ready entrance to his mind. Lagus himself was never a regular graduate or an accepted teacher of law. He filled in early life the place of private tutor to such students of the University of Louvain as chose to employ him, and was later syndic of the city of Dantzic on the Baltic. His book was first written for his own students, and was so free in its expression of criticisms upon prevailing methods that it gave great offense to the authorities, and was even put into the Index. But its merits enabled it to triumph over all opposition, and it went through several editions and no doubt had a most important influence in forming a new school of legal instruction. Even after three centuries and a half the student of scientific law may read it with interest and instruction. For the best account of Lagus see Dr. Theodore Muther's *History of Legal Science and of the Universities in Germany*, Jena, 1876, pp. 394-424.

In this sketch and in the picture given by Savigny of the lowest degradation of legal science, after its revival in the universities, the thoughtful reader must recognize too many traits of our own time. Thus, when he points out the neglect of the original authorities and the substitution of mere compilations at second or third hand, instead of a constant effort to trace back the law to its original principles; or when he speaks of the entire abandonment of efforts to treat the law as a system, as a consistent and harmonious whole; a task which by the natural law of its development should have given to that scientific unity a constantly increasing influence upon the separate rules and doctrines applicable to particular cases, instead of being neglected altogether in favor of exclusive attention to the authority quoted for each particular rule. There are even analogies in the external form of the law between the two periods. As in the fifteenth century, the earlier variety of juridical works had all given way to mere consilia or collections of opinions upon detached points, so in the nineteenth century we have a boundless waste of such opinions in our reports, increasing at the rate of a hundred volumes a year; with almost as many volumes of treatises, most of which are mere compilations of the same opinions, without the slightest attempt to evolve true principles or to present the law as a system.

With reference to the entire lack of historical study at that time and the resemblance of our own country at present in that respect, the lesson furnished us by the comparison is still more instructive. There was indeed for the fifteenth century the excuse that a historical science of law had never yet been dreamed of, while in the nineteenth we are willfully or ignorantly neglecting a method that has within the past century been thoroughly tested in Europe, and the benefits of which are evident to all who have paid it the slightest attention. Savigny's own words are here worth quoting:

All of a science that is the product of continuous development forms an organic whole; and no portion of it can be thoroughly understood unless it is studied in connection with the rest. Thus the entire system of legal science which governs our actions can only be thoroughly mastered by historical study, going back to its first beginning and following it into all later ramifications. Then we can use it freely for every new purpose as a means by which the freedom and effect of our own thinking will be increased and its object accomplished. Used in any other way, every mass of knowledge will only cramp and oppress our energies without our knowing it, and make us its servants where we should be its masters. (Savigny, Vol. v, p. 474.)

The chief improvement of the sixteenth century was undoubtedly the abandonment of the legal method or study of the texts of law in their original order, and the substitution of systematic works in which the natural order of the subject was followed with more or less success. The work of Lagus, already mentioned, was perhaps the earliest example of this kind which now retains any value; for in the three centuries since there has been a constant improvement in the arrangement of these works, due to a more thorough comprehension of the law

itself and a greater mastery of the mode of teaching it. The most remarkable evidence of this mastery is in the great reduction of the size of the books placed in the student's hands. Instead of compelling him to read through and memorize ten or a dozen octavo volumes in the course of a year, the European professor places in his hands a modest duodecimo called institutes or pandects, containing all that is essential for him to read in a semester or even a year, while the subject condensed in that book will furnish the topic of daily exercises or lectures during that period. By this process the student's memory is charged only with those fundamental principles which he must always carry there in order to make any use of them; but his comprehension of them and power to apply to them is obtained by the fuller explanation given him and by his daily reflection upon them. This work, moreover, is not upon a single branch of law, however important, as all the work of an American law school is, but it is upon the law itself as a complete and harmonious system. Even in the fuller treatment of the Pandecten the space given to such topics as represent our "property," or "contract," or "wills," is hardly greater than it would be in the most elementary book known to American law; but the object of these few pages is to give the student a complete and thorough comprehension of the nature of the subject under which all his subsequent acquisitions will arrange themselves according to the very law of thought; not merely to give him a selection of the most practical rules by which he may know how to decide this or that particular question. Perhaps the greatest advantage in this mode of study is that the student acquires the law as a whole and not as a congeries of separate and independent doctrines; or, as it has been expressed by an eminent writer, quoted on page 37 of our report of 1891, "The continental lawyer in a comparatively brief university course of jurisprudence obtains a firm mastery of the entire law; the English lawyers are specialists. Not one is able to grasp the whole system."

We have dwelt on this point the more fully because it is needed to qualify what must be said of our present text-books as means of instruction. With few exceptions all these are written for the use of the practicing lawyer, whose object it is to find a case in point for the brief he is making, with the least possible expenditure of time, and without troubling himself with questions of classification or principle. The student, on the other hand, needs books rigidly systematized and dealing chiefly with general principles. It is only from these that he can assimilate matter which will become a true part of his mind and the basis of his legal thinking. For the decision of particular points or for the illustration of general truths text-books are worse than useless. For these things he should be led directly to the cases themselves, but only under the most careful guidance.

The experienced lawyer can deal intelligently with a great body of varying if not conflicting cases, and deduce from them a harmonious

doctrine, provided such a doctrine be contained in them. Even he will find it impossible to do this except by the heroic method of rejecting a considerable minority of the decisions which, according to the popular theory of judge-made law, have the same right to remain authoritative with the majority. The task would be impossible to him if he had not a firm grasp of the principles to which every such decision must conform to be an integral part of a consistent and logical system. Most lawyers have learned their principles unconsciously and without fixed rule, as a mechanic learns the expert use of his tools or the physician the elements of an accurate diagnosis. They perform the task of applying them to new cases by what is called "sound judgment" or "grasp of principle," but they are quite unable to explain to a student their *modus operandi*.

To expect the beginner to deal in this way with the cases is little less than absurd. The brightest and swiftest could not go into a barber shop and handle a razor on its customers without making his ignorance and awkwardness evident to the youngest apprentice, yet he is expected to handle the keener weapons of analytic casuistry with utterly unpracticed faculties and obtain by the operation the very principles on which the value of all his subsequent reasoning must depend.

We do not mean to underrate the value to him of judiciously selected cases as objects of study, either in the deduction of principles from their comparison as contemporaneous authorities, or (what we regard as of still greater use) as teaching the historical growth and development of such principles in time. But both those processes imply that the cases have been chosen and arranged for him by a teacher who knows what he desires to accomplish, and how he is to effect it.

Neither of these objects can be gained by setting the student to read all the cases, well or ill decided, accurately or blunderingly reported, or a digest of them, or a so-called treatise made up of them, but stated in any order that will best enable the reader to find in the same chapter or page all the cases resembling each other in the facts, without a thought of the principles which each or any of them may illustrate. In truth, the most popular of our text-books—many of them excellently adapted for the use of the practitioners—are so utterly devoid of scientific arrangement, or of any arrangement except such as will enable the attorney to find a case in point with the least possible thought of general principles, that the only advantage they offer over the perusal of cases at large is their condensation of results and the increased facility they give for a mere verbal memorizing of these results as a cram for examination.

A limitation of the case method, and probably an unavoidable one, is its confinement to the doubtful part of the law and disregard of the great but settled principles upon which so much of the lawyer's reasoning depends. These principles have been evolved by cases as truly as

the latest rule of contract or of tort. The difference between hereditaments and chattels, the distinction between chattels real and personal, have been worked out by decisions of the sages that sat in the "common place" centuries ago; but no teacher would think of tracing their origin back to the primary authorities. All our canons of inheritance only formulate the results of early cases; but who would make his students read assizes of mord and writs of aiel and bisaiel or of cosinage in order to know them more thoroughly? It is not merely from dislike to the ancient phraseology; most of the collections of cases for students' use contain extracts from the year books on questions that have remained unsettled from that time. They pass by only those which have determined the point so well that it has never been mooted since. This would be of less consequence if the student could find these well-settled doctrines properly described in a history of the early law, showing the manner of their development. This historical method, indeed, is the proper complement of the case study given to the modern law, and is to be hoped that we may yet have it. But at present the case method offers nothing for a most important portion of the entire field of law.

For example, the beginner is trained to careful discrimination of the nicest shades of the agent's liability, or to draw the exact line between the fellow servant and the alter ego or vice-principal; but who tells him how servant and agent come to be different relations, or defines either one distinctly enough to help him appreciate the result of their difference?

The result of this elaborate study of actual disputes and ignoring of the settled doctrines that have grown out of past ones is a class of graduates admirably calculated to argue any side of any controversy or to make briefs for those who do so, but quite unable to advise a client when he is safe from litigation.

We are not setting up an ideal standard of morals when we insist that even in the law school, the work of which is mainly technical, the student should not be so trained as to think he is to be a mere hired gladiator, fighting indifferently for one side or the other that pays his fee. There are, indeed, many cases in which, once begun, he may justly maintain the legal right of either party. But every lawyer has much to do with the question whether litigation shall begin or not, and he who incites it from selfish motives must be ranked with the physician who knowingly spreads the germs of disease. Even he who begins or needlessly maintains an unwise action for lack of sound judgment or learning to perceive its defects is unfit for his high calling. Assuming to be the guide and adviser of other men, he is bound fully to qualify himself to guide them aright, and this he can not do unless he knows the whole law, at least in its general principles; not merely those parts of it on which litigation is now possible. This distinction is perhaps oftener overlooked in discussing methods of study than any other.

There is much law upon which no litigation ever arises—unless it be

from sheer ignorance or knavery—but which is just as important and significant in determining the rights and duties of men in their reciprocal relations as if it were subject to be reversed in the next term of the Supreme Court. All the common terms designating legal institutions and relations, kinds of property, forms of estate, wrongs and remedies, have a wide extent of settled meaning upon which no question ever arises. This may have been gradually formed in past times by former cases and decisions, but no one thinks of disputing it now. It is only on the border lines between two or more of these broad provinces that doubts spring up and cases grow.

No conception held in common by a large number of men such as the members of a State or great community can be very complex in its nature or difficult of comprehension. This may be taken for granted as one of the laws of thought. Consequently the fundamental notions out of which the rules of law are derived must be of this simple character, since it is in the general acceptance and uniformity of these notions that the common law exists as such.

Liberty, property, reputation, land, chattel, would be useless terms to reason from or with, if they were not uniform in all intelligent minds, and to such they must be capable of correct apprehension without a process of verbose definition and without much mental effort of any kind. No deduction can be drawn from them that is not warranted by this simple character.

Perhaps the most useful single lesson we can learn from the continent at the present time is the value of the historical method in teaching the elements of law. Much as has been done recently in England by Sir Henry Maine and his followers in this direction, it must be owned that we in the United States, and even our English cousins, are a century behind the continent in appreciating the value of the historical method of study as applied to the moral and jural sciences. In our law schools it seems to be quite unknown, as much so to the teachers as to the students. Yet foreign experience has left us no doubt of its adaptation to those elementary notions of law for which our other tried methods have proven almost complete failures. Only the minority of beginners enter these schools with minds so trained to abstract thought as to readily take in and appropriate a full systematic treatment of the rationale of law sufficient to enable them to use the most rudimentary conceptions. To the majority of practitioners its use is simply incomprehensible. "What difference does it make to the law to-day whether the rule was this way or that one hundred years ago? I do not want to know or use any law that is not clear law now. It would only confuse me if it differed from the present rule, and be a waste of time if it did not." Such are the common objections made to this proposal; and the proposer is fortunate if he gets no worse reputation than that of a harmless enthusiast who would waste his own time and would lead students to do the same.

It must be owned that he sometimes deserves it, when his zeal outruns his judgment and allows any curious scrap of legal antiquities to figure as a part of legal history. The two should be carefully distinguished; but it is so much easier to pick up scattered bits of curious fact than to slowly reproduce the past life of a people or a science! Much that is valuable material for history is not history, and to cumber the student's mind with these scattered facts is even worse than to load his memory with disconnected rules or cases of the present day, with which they have to work out the practical problems of law, such as those of right and duty, of wrongs private and public, direct and indirect, of *injuria* and *damnum*, of legal force, fraud, negligence, imputability, etc.

Even the great reputation of Austin for the last thirty years has never drawn attention to his very able attempt at such a scientific analysis of these terms as he deems essential to their proper study.

The average student tries hard to commit what is said in his books to memory, but gets no clear notions from it, because it has as yet no connection in his mind with the forms it takes in actual life, and with most it ends in the memorizing of a definition for each word that he thinks the examiner may ask about. Hence some of our text writers have given up entirely the effort to explain these before entering upon the practical uses made of them.

To such teachers and such students it may seem almost paradoxical to say that mere abstractions, so difficult to apprehend when they are presented as parts of a complicated system actually existing, may be plain and obvious when traced through the centuries of their rise and development, so that a mere beginner can follow easily and with interest the growth of the same system from the few rude notions of our ancestors to the complex relations of the modern law. Yet we do not appeal solely to European experience for the value of the method. We have only to look into the most rigidly systematic of our treatises to see how certainly the author in every case of doubt or difficulty falls back upon the historical development of the subject to explain it, or appeal to the experienced practitioner for the grounds of the confidence with which he depends on the principles that have unconsciously formed themselves in his mind, or ask our president, experienced practitioner, eminent judge, and admired author in one.

But chiefly the historical method commends itself for elementary teaching, because it does not show the laws either in the form of mere abstractions or in that of individual cases, but illustrates at every step the process by which it rises from the mere evidential fact to the highest generalization, though in the inverse order. It begins with a few simple wrongs to the person and possessions, and shows how these become differentiated into the wrongs of the man, the husband, the master, the householder; how it then learns to discriminate in each case between the direct attack and the carefully laid deceit and the negligent harm;

how it adds to breach of common right that of an obligation imposed by the party's own will, and how it passes from the enforcement of common law to the direction of the use made of legal rights as determined by the conscience of a good man according to equity. So, too, of its gradual development in all other branches.

Most of all, the historic method suits the tyro, because it does not deal with abstractions alone as the elementary part of systematic law needs must. It presents rights and wrongs, and duties, and remedies, not under their names and their definitions, but as found in the actual forms of primitive law, the blows and maimings, the stealing of cattle and of wives, the feuds and beseigings and outlawries which occupied the primitive moots. It goes on to show new forms of right in tenure and estate of lands, property in chattels, contracts in their double office of transferring property and creating obligations, and all these again duplicated in the distinctions of legal and equitable rights, etc. It thus presents the most practical and obvious forms of these acts in their growth toward the institutions of the present day, but always as linked together by the scientific notion of rights and duties, wrongs and remedies, on which they are based to-day, and thus illustrating them to the beginner.

The genetic order of abstract ideas and of the relations animated by them can be traced as accurately as those of the various forms of matter. The task is even easier to a cultivated mind, since the variety is less confusing and the chronologic order simpler in the history of each race or nation. The simple or homogeneous is easily discerned from the complex, heterogeneous notion, and precedes it even more certainly in the mental world than in the material. This has only been obscured by the ancient but fallacious axiom that morals and the other reflective sciences have been the same in all ages; to be consistent with which we must deny all possibility of growth and development, such as history shows in morality and law.

Equally inconsistent with the true conception of development in legal ideas is the mistake, now more frequently committed, of carrying back each separate notion or institution from one system to another, as if none could be accounted for by any other method. This is sometimes done by the most zealous historical students, who in their love of tracing laws and customs through the past and from one people to another seem occasionally to forget the possibility of a new birth in the long ages from the beginning. If we had succeeded, as the physicists have, in eliminating certain pure elements of law that can not be accounted for by the combination or changes of other bodies, it might be safe to assume that these can not be fully studied till we have thus traced them to the beginning of all things. But the phenomena of law are of a complex character, and there are very few that do not undergo great changes of form in the course of a few centuries, even in one and the same nation. These changes are occasionally so complete that the historic ex-

istence of one form may be said to disappear entirely and one or more new ones to be formed from it. We may find a well-marked new institution made by the combination of different elements, no one of which accounts for it without the rest, or can be said to have historic continuity with it. The same thing may have occurred in early ages as well as later; yet how often when the trace is so lost we find students assuming at once a foreign origin as necessary and wasting much labor in looking for the nearest clew (*e. g.*, the origin of the jury or that of the Roman *obligatio*).

This tendency to misunderstand the past by carrying back conceptions and terms of later date to explain facts that occurred before these were formed appears in its most fallacious form in the case of those general abstract terms that are so broad and simple, and find room for such a wide variety of concrete phenomena, that we can not think of the mind itself as existing without them.

These are the "innate ideas" against which Locke's war was waged and which he conquered so completely in theory that no one would maintain their existence as a scientific fact to-day. But when any one of them makes its appearance as a result of induction it has so simple and natural a form that we can not think of it as nonexistent at any period when men like ourselves were on the stage of action. Such are our notions of promise as an element of contract, of command as an element of law, of property as a relation to the external world.

But why go back in our historical study to periods so far from us that a tyro can see no resemblance whatever between the law then in force and that of to-day?

Partly because even then one who has traced the whole system can point out truths that bear directly on questions still agitated, as when in the earliest volume of the year books we find discussed questions still unsettled in the law of bailments or husband and wife. (Y. B., 20-21, Edw. 1.) The very absence of modern doctrines is often the fact of greatest importance to be pointed out in these early periods. To establish the truth that our Anglo-Saxon forefathers knew nothing of legislative power, of motive as a legal test, of contract as a distinct element, clears the field of many mistaken theories, and simplifies the student's task more than any other course he can adopt. Every reason for studying the law historically applies with as much force to one period as another. The same considerations that lead us to study the law of the eighteenth century for the sake of understanding that of the nineteenth work with increased force at every step and require us to know the law of the eighth century before we proceed to the ninth.

Experience confirms what we learn from theory in this. There is no point in the long history of the common law where we can begin with the law then in force, apart from historical information as to what preceded. The worst mistakes that have complicated the problem have

grown out of ill-advised confidence in our power to understand the law of a particular period by our modern standards of what was natural law. The aid of the strictly historical method is even more necessary the farther back we go. The error of interpreting facts of the past by ideas of the present increases with every stage of our retrospective study. Past and present are always merely relative terms.

The value now set upon the historical method in Europe is shown by the maxims which a distinguished jurist has set upon the title page of his book: "It is history which teaches us what the law is; it is science which teaches us to use it." It is shown, also, not merely by the mass of literature devoted to that purpose, but still more by the position of the historical study in the universities. Thus in the great body of regulations for the Austrian universities, including not only Austria proper, but all those in the Empire, we find that the first year of study out of the four occupied by the university course in law is occupied almost entirely with the study of the history of the law. In these universities the student must attend lectures or similar exercises for at least twenty hours a week. Of these there are given to the history of the German law, public and private, four or five hours a week during the entire year. To that of the Roman law (which there, as in most European countries, is regarded as a part of their own and is carried on simultaneously) eight hours a week are given in the first or winter half of the year, while the pandects or course in the doctrine of that law begin with the second or summer semester and occupy twelve hours a week. No student is allowed to go on in the third year of the course without passing satisfactorily a careful examination on these subjects. Private students not of the regular university course, who are admitted under some circumstances, must in all cases pass an examination upon the history of law before they are admitted to take the other courses. Substantially the same regulations prevail in the other universities of Germany, and in most European countries.

It should be observed here that the history of law as there taught is in the strictest sense a scientific account of the development of legal doctrines. It is totally a different thing from the study of mere antiquarian law. Nothing shows more clearly the lack of correct notions on the subject in this country than the assumption, often made, that to read Blackstone or Coke or any other writer who describes the law of a past period is to study the law historically. Such writers may furnish valuable material for that study; but a statement of what the law was at any period, however far in the past, is not history.

Perhaps many American lawyers and teachers will doubt the feasibility of applying these European examples of method to the common law, and even consider the proposal to do so the dream of an idealist or of one to whom the law is merely a theory and not practical. It may be well, therefore, to ask here in what shape this application is to be made.

The distinction between English and continental law in respect to authority recognized has been that these generalizations have been taken on the continent from the writings of eminent jurists whose opinions as to what the law was on a given subject have been the only authority recognized in the schools, and the leading one in courts of justice, while in England the only statement of the same to which the courts would listen have been those contained in the opinions of judges uttered while deciding cases. Originally the difference was very great, for these opinions were oral and the reports of them (as in the year books) mere notes to aid the remembrance of the sages who sat in the exchequer chamber or who took part with them in the discussion as sergeants, and seem often to have had as much influence on the formulation of the law as the judges themselves. The concentration of all these in a single body, as well as their mode of discussion, aided materially in the formation of a consistent and logical body of law such as every experienced lawyer could carry in his mind. The habit of publishing reports, and still more the later practice of delivering written opinions, gradually made these assume the form of essays upon the law beyond the very point decided, and thus diminished the difference of the two methods; though this tendency was restrained on the other hand by the distinction made between what was said in explanation of that point and the mere *dicta*, which were as pure expressions of opinion as those of the continental writer. In this country the separation of forty or fifty law-stating courts, each of which knows the others' decisions only as legal literature, has done still more in the same direction, until the law common to the American States has become almost as completely the product of abstract thought as that of the European continent. Hence the indulgence with which treatises are now quoted to them, while conversely the foreign tribunals are gradually adopting the use of their own and similar decisions as authority, after the English method. Both movements show the mental sameness of object in the two, and the necessity of both elements; that of the speculative generalizations to direct the reasoners from case to case, and make the law a harmonious system, and that of frequent reference to the separate points decided in the individual cases, to prevent the law from losing its grasp on actual life and becoming a mere theory. There is little danger indeed with us of the latter mistake while our text-books are made up so entirely of a congeries of such points, without theory enough to bind them together. But it is vain to complain of this error of students if nothing is done to show them a better way. They will go on committing to memory each point, each rule of law as a distinct thing, if they are not able to comprehend their true nature. So long as the books used in our schools are mere collections of such points, and of the cases in which each point is sustained, without a word to show how one rule is connected with another, how the points owe their genesis to principles, the evil will remain. It is absurd to expect that a class of

beginners will strike out a scientific method for themselves in a mass of such "practical" rubbish, merely because we deafen them with praises of the logical consistency and scientific character of the law. All this talk of scientific law, of principles, might be mere glittering generalities, if in truth the words of one judge or court in deciding a case had any magic power to compel future judges and courts to decide in the same way—if a precedent were as sure to produce the same ruling for which it is quoted as a chemical formula to give a certain result.

There is no point upon which experienced lawyers are better agreed than the existence of principles in the common law. Their own experience shows them that, as soon as they have become familiar with practice, the distinct rules and decisions of the books change their form and become general conceptions, more or less definite in their minds, but from which as a basis all their reasoning proceeds. Ask any number of good lawyers the proper method of teaching the law; there will be as many answers and different methods as there are individuals, but every one will conclude by telling you that his method is the true way of reaching the principles of the law. Nor is his faith in these principles weakened by his inability to give a definite account of them. One man believes that they are based on ethics or natural law, which has in some mysterious manner compelled the positive law to shape itself in a certain way. Of late years this theory has to a considerable extent given way to another by which the principles of the positive law have been formed upon social science or upon political and economical considerations, which have led men to consider certain courses of conduct as duties, certain others as wrongs; while the law has merely added to the conceptions thus formed their legal relation to each other. It is needless to enumerate the many other explanations given of these principles, all of which have probably some element of truth in them, but have never yet been so stated as to account for their controlling influence over legal rules. The fact is clear that in all our reasoning upon a new case presented to us by a client we do not start with the law of that case, as according to the older theories we should. The first step is to reduce the evidential facts which the client states into some of these conceptions furnished by the law, and to which the law gives not only a definite meaning but a definite effect; and thus to determine whether the client has a right which has been infringed, or owes a duty which he has broken, or in any way has made himself liable to the jurisdiction of the courts, or may call upon them to vindicate his rights against another. It is of these general conceptions and terms that the common law consists and by its very nature must consist. Every rule or proposition of law must depend for its entire meaning upon these terms contained in it. No such proposition or rule can well be formulated by customs or common consent; it is only upon single terms and conceptions that these forces must operate. The whole

community may hold a pretty clear and definite conception of contract or property or crime or injury or damage or the countless other conceptions of the kind upon which our law is constructed. From these conceptions it may deduce a great variety of special rules; as that a contract must be mutual, or that it must be founded on a consideration, etc.; but no one of these rules can have any authority beyond what it derives from the fundamental conception, unless given it by a legislator, or at all events by the action of an individual mind. Hence if we study our own thoughts upon legal questions carefully we shall see that what we take for principle is a deduction from these accepted terms or from their relation to each other and place in the system. And, further, that elementary law properly consists in a knowledge of these important terms and of the system which they compose. Not merely a definition of the term, to be repeated to the examiner as a form of words, but a full and living conception of it as a legal entity from which we may deduce law as we deduce the rules of any other science from its fundamental conception.

How is this full and satisfactory knowledge to be obtained? It is evident that there are two modes of doing it. We may study the origin and growth of these legal terms historically, as we do that of other words and of languages in general, or we may study them as they now exist in our law, comparatively in their relation to each other, assuming that as all belong to a single harmonious system the exact meaning of each can be deduced from its relation to all the rest. These two methods differ widely in their processes, but if correctly conducted should coincide in their results. Nothing can be more certain than that the conceptions of a contract and of a wrong independent of contract which have resulted from all the past thought of the race, must by the very laws of thinking harmonize with each other if correctly stated, and lead to consistent results unless there be some error in the process. Thus the two methods serve as a check upon each other. We can prove the conclusions of each by the results of the other, as we do a sum in arithmetic; and these results so obtained and proved will have an authority for us and for others far greater than that of any individual thinking.

A distinction is sometimes made between elementary law and general jurisprudence or other similar terms. Undoubtedly no two of these have precisely the same meaning. By elementary law we usually understand the terms and relations of our own system as distinct from those of other peoples, while general jurisprudence usually implies some knowledge of foreign law and a comparison of its phenomena with our own. But as a part of legal education the two differ not so much in kind as in extent, and, therefore, the question whether general jurisprudence should be placed at the beginning of the course or after it relates only to that small part of it which lies outside of our own law. The answer, probably, will depend in each case upon the average pre-

vious education of the class. But there is another consideration of much more weight for placing this elementary law at the very beginning of the course. A little reflection will show that the general terms of which it consists are as a rule identical with the ultimate facts of pleading. These facts must correspond to the evidence which will sustain them on the one hand and to the law which the judge will apply to them on the other. The syllogistic nature of pleading has often been pointed out; it is only the statement in other form of the fact that every allegation must be a term of fixed meaning, and thus capable of forming part of a proposition of law. Hence the value of exercises in pleading and especially in code pleading where there are no authoritative forms, throughout the course. Hence also these will continue and illustrate the instruction in elementary law.

The law by its very nature deals with general terms and conceptions. There can be no rule for a single case or person or thing until it has been reduced to the class of which it may be considered a member. Each individual case differs in some respects from every other. As Carlyle expresses it, "nothing ever happens but once in this world." The law can not deal with these individuals, persons, or things, unless it has reduced them to classes by abstraction and generalization.

This is not peculiar to law, *i. e.*, jural science, but common to it with all other sciences. Physics or chemistry, geology, etc., must classify the objects of which they treat before any scientific truth can be stated, any natural law formulated, any assertion made beyond the mere fact of existence under certain conditions. (And these conditions can only be made instructive or even intelligible when stated in general terms.) Astronomy, perhaps, deals with the least number and most marked of individual cases; but it is no science until we can generalize its phenomena.

The great advantage of the student of physical science is that he can form his generalizations by the aid of the senses, seeing, feeling, tasting the individual objects, measuring and weighing them accurately, to say nothing of the immense help in this process derived from the telescope, the microscope, and other apparatus. Those operations are in themselves a process of abstraction and generalization and prepare him for the higher generalizations that are formed by reasoning. Moreover, he can, by repeated observations and experiments, test his knowledge at every step; he can even devise experiments to test the accuracy of the higher truths which he can not observe directly.

In law and the moral sciences, man can not observe directly by the senses or experiment at will. His general truths must be formed by reflection alone and can only be tested or examined by the same process. All his reasoning in these sciences depends on major premises of his own formation, which are themselves constantly undergoing reformation or insensible modification. Almost the only test of the accuracy of his generalizations that does not depend on other im-

perfect processes of the same kind is that of consistency between them. If two or more rules are conflicting, two or more general terms for the same class of things (or for classes of which one is a subdivision of the other) do not harmonize, there must be an error in the formation of one if not both. As no human error can introduce an authoritative inconsistency into the unwritten or common law (as legislation may), all its rules and terms should be consistent and harmonious; a conflict between them in their application to the same state of facts is proof that one or the other of the conflicting rules is wrongly stated and does not embody the true law. So, too, Blackstone's dictum that the overruling of a former decision on a common-law point is not a change of law, but shows that such decision was never law, is a logical necessity that can not be rejected without abandoning the very notion of an unwritten law.

The chief object of jural law being the administration of justice (and incidentally at least to enable every citizen to foresee the legal consequence of his acts), the terms in which it is expressed must be so definite that they can be applied with uniformity to individual cases, and so consistent that a single case can not be arbitrarily brought under two or more terms leading to different legal results. We can not group persons, or things, or facts arbitrarily, or as a mere matter of convenient expression, nor can we abstract and generalize by marks or qualities that will not be uniformly found in the class designated. In other words, the legal term must express the inherent nature of the facts designated by it. This inherent nature is not open to observation, as in physics, but requires a careful study of the ordinary relation between facts, and especially of the relation of cause and effect. Hence, no man can form the terms intuitively or in advance of the facts to be denoted. They are not imposed by authority, but are developed from facts by science.

Whatever be our theory of the nature of law, the unquestionable fact is that the recognized sources from which, directly or indirectly, the student must learn the law do not present it in the form of commands to do or not do the specified things. They do present it in the form of rights, duties, wrongs, and other general conceptions subordinate or auxiliary to these. Persons and things are divided into classes for the purpose of determining what rights or duties belong to the former or have the latter for its objects. Actions, the third great class of such conceptions according to the classic jurists, are the means by which rights are vindicated, duties enforced, wrongs remedied or punished. Few statutes or decisions, indeed, deal with these broadest categories, but all of them do with their subdivisions and kinds. They show that certain things are property and therefore objects of ownership; certain others are not and therefore may be confiscated; or they lack some other quality of the right called property; that a married woman or an infant is or is not a person in the full normal sense and, therefore, may or may not

form a binding contract, etc. The variety of such subordinate lessons is immense, and it would be tedious to show the relation in which each term stands to these general conceptions. But there is no other difficulty in proving that their whole force and meaning in law depends on their respective relations to one or the other of them—that of persons, things, or actions, or the relations between persons that we call rights, wrongs, duties. Decisions on such points as that a river is navigable in law when it is so in fact, or that its navigability depends on the ebb and flow of the tide; that ice is property, though water is not, etc., have no legal force and meaning whatever, unless we connect them mentally or explicitly with the rights and duties that flow from navigability or nonnavigability; with the rule that ice as property may be a valuable consideration for a contract, or the object of wrongful conversion or trespass—and so on.

While the law was considered to be essentially a system of rules of action prescribed by a superior, the student's first introduction to it was naturally to learn by whom and how those rules were prescribed, in how many forms they appeared, how they were to be interpreted so as to fit the actions of men—in short, all that nebulous form of thought known as the philosophy of law. Added to this, the thorough student must then properly master ethics, of which law was only an applied form, and so much of social science as was recognized a century or more ago, with political ethics or the science of government, civil liberty as its counterfoil—in short, all the sciences that would prepare the most mature mind to enter upon the task of legislation or to govern a state after the most approved theories. (For illustration see the well-known work of Prof. Hoffman, "A Course of Legal Study," a work of real erudition and great merit after its kind.)

The obedient pupil went through as much of this as he was able to comprehend, with some advantage to his general mental development, but with the least possible help toward the special work in which his life was to be spent. The kinds of law were soon defined as divine, natural, positive, written or unwritten, constitutional or statutory, etc., and a great mass of platitudes swallowed with an indefinite notion that he was learning the principles of the law he was to practice. But when he entered the office, or even when he passed from this introductory reading to the books that his teacher used in actual practice, he soon found that he had to deal with things and relations of which he had yet formed not the slightest notion. Instead of having a system of formulated rules which had only to be interpreted to fit the facts of his client's case, he was compelled to work painfully and almost blindly over these facts before he could get them in shape to suggest any rule whatever; and then to search through a wilderness of other cases reported in the books before he could formulate such a rule for his client as he could propound to the court with any prospect of its being accepted. For this, in fact, is just what the practicing lawyer has to do

in all cases involving a question of law at all. Instead of applying a known rule, prescribed beforehand to govern it, he has to reduce its facts to the form of some recognized right among the endless variety presented by the books, and to show its violation and the damage thus done his client, and to state all this in technical terms that shall make these elements of an action visible to the court, and not to be explained away or defeated by his opponent. Then and only then he may begin to consider the exact rule by which the issues between them may be solved in his favor, and show its consistency with principle and other rules already formed in the same way and reported. Unless his case or his defence be a very plain one, he will be lucky, indeed, if the rule thus offered to the judge's consideration, and sustained by a huge collection of authorities and arguments, is the one on which it is finally decided. Even if he be successful, he will find when he hears the judge's opinion that he has only made a rough guess at the "law" of his case, and that the court having gone through not merely the two briefs, but a similar process of evolving law from the facts, has reached quite a different statement of the rule prescribed by the supreme power, and that it is the court's rule and not his which has really been the law of the land all the time. He will learn after a while not to be disappointed at his failures to know the law exactly as the judge does, provided he obtains a remedy for his client's wrong; but he will be indifferent throughout to the question whether the rule that gives it belongs to the natural or the positive, the written or the unwritten law, or whether it fulfills the requirements of that philosophy of the law on which he has spent so much time.

The other or modern view of the nature of law (*jus*) leads as directly to a natural and practical plan of elementary study as the former did to a wrong one. Its truth as a theory is shown by its correspondence with the actual facts, and this again suggests the true method of teaching. The law regulates the relations of persons to the state (public law) or to each other (private law). Confining ourselves here to the latter for illustration, we find that its subject-matter is those relations between persons which are the necessary result of their dwelling together in a state and maintaining social and business intercourse with each other. It therefore exists before the law and is regulated, not created, by its rules. Its classification does not depend on rules prescribed, but on the nature of human actions and interests. It formulates these relations as reciprocal rights and duties. Most of its rules express the natural results of those conceptions. Rights are the form of the relation where the person is entitled to enforce his own will, positively or negatively, upon others; duties where he must conform his own actions to the will of one or more other persons. It makes no difference whether these result from the very nature of the act or from the positive law, *i. e.*, from the will of the community. In other words, it makes no difference in practical effect whether the right or duty is

so plain that all accept it as based in the divine will or the law of nature, or so novel that it requires positive enactment for a court to enforce it. In case of doubt, the enforcement by the court is proof of its existence as a legal right or duty, whatever its origin. The court, however, do not decide this point at their own caprice, but in accordance with fixed standards of judgment. They find, not make it a legal right or duty. Compare the lawyer's actual work with the theory of his science, and see if it is explained better on the present theory than on the former. Whether in litigation or mere advice his first duty is to examine the facts out of which the relation between the parties arises. Do these show a right on the one part, a duty on the other? The proof of either of course implies the other, if a legal relation actually exists. If so, it is capable of expression in some of the accepted terms by which such relation is expressed; there is a contract between them, or a wrong suffered, a duty broken or neglected, resulting in harm to the innocent party. The pleadings express this and call for the remedy supposed to be due, and also state the defense. When the facts are determined by trial, the court compares them with like cases already decided, and determines their exact legal effect as coming or not coming within the same principle as deduced from these.

It may be expected that, to comply with the instructions of the association at its last meeting, the committee should give here a course of study in which the different topics of the law are arranged very much as we find them in most of the law school catalogues now published, but with such improvements as the foregoing considerations and our study of the subject might enable us to suggest.

Even if this were possible, it would be a delicate task from which the committee might well shrink. It would involve a criticism of the text-books now in use, or at least a selection among them that would certainly lead to controversy. But even if confined to the names of topics and leaving each teacher to select for himself a proper text-book on each of these it would, in our opinion, be of very little service, first, because on many of the topics as we should arrange them there are no separate text-books covering the law on that subject; and, second, because the most important recommendation we can make is the abandonment of the present method of teaching the law mainly by distinct topics, at least during the first year of the course, and the substitution for it of a careful and systematic study of the system as a whole after the European method. We do not disguise from ourselves the difficulty of carrying out this recommendation with the books now at command, and before the law has "gone through the schools" in Ihering's phrase, that is, has been reduced by jurists and teachers to the form best adapted for the instruction of a class. So far as the present books can be made useful in this method, we would by no means object to their use. Every teacher must judge for himself on this point, and the convenience to him of a text-book as well as its popularity with students who

desire to find the law in the shape that they know will be familiar to the examiners, will doubtless be enough to prevent a too sudden change or a detriment to the interests of publishers.

But every teacher of law who is really in earnest in his work will find that he can construct for himself a far better text-book than any he will find at the bookseller's. Nor will it be necessary to expend for this purpose any large part of that wearisome labor which now goes to the construction of a treatise for practicing lawyers. There will be in place of this a call for active thought and study on his own part; but it will be in the very line suggested by his daily work as instructor, and of immediate benefit to himself even more than his class. Let him begin by constructing the briefest possible outline of the topic he is about to teach, embracing its relations to the law as a system, a careful definition of all its leading terms, and a statement of its principal rules, so arranged as to show the connection of each with the principle from which it is derived. As for the matter which fills the bulk of our present treatises, the application of these principles and rules to varying states of fact, and the mass of references to the cases decided, they will be mere surplusage, and surplusage vitiates in teaching law if it does not anywhere else. Not that cases should be excluded from his teaching; on the contrary, they should form the main authorities from which it is all derived, and the class should be constantly referred to them and constantly trained in their use. If an instructor finds that he can dispense with the manual or outline and give his students that clear and systematic knowledge of a topic which they need to comprehend it by the use of cases alone, we have no criticism to make upon his method; we only think that he will find it slower and more laborious to himself than the construction of a proper manual, to which will, of course, be added in daily work a large mass of explanation and complementary teaching, such as if given alone would constitute a lecture. It will not be difficult for him to distinguish the matter that should fill these lectures from that which belongs in the manual. The latter should be that which every student or lawyer must know, without having to go to the books for it after it is once learned; the lecture should be intended simply to enlarge the student's comprehension of the principles thus learned and to make him familiar with their application in actual life. But no effort should be made to impress this matter upon his memory as distinct from his understanding.

The mode of studying particular topics or branches of law presupposes, in our view, an accurate general knowledge of the system, both in its history and in its present theory, to which objects at least half the course should be devoted. We believe that if this plan is carried out nearly all that our present courses contain of what is called "practical law" will be easily mastered in half the time now given it, and in a more scientific form; that is, one better adapted to the actual

needs of the practitioner. Thus, without adding a day to the length of the present course (be it two years or three), that instruction in elementary law and in the history of our own law, which it is the first object of this report to recommend, will constitute a clear addition to the student's acquisitions, and he will leave the law school doubly prepared for the actual work of the profession.

The reform of legal education in England.

[Appendix to preceding Report.]

In England recent history discloses determined and well-directed efforts on the part of both branches of the legal profession to elevate the standard of general and technical acquirement for admission to practice, and to maintain the character and rank of the profession as a learned profession in fact, and not merely in name or conventional theory.

The general subject of legal education in England appears to have been first systematically dealt with by the great "Society of attorneys, solicitors, proctors, and others, not being barristers practicing in the courts of law and equity of the United Kingdom," otherwise known as "The Incorporated Law Society," whose existing charters were granted in 1845 and 1872.

Up to the year 1833 it would seem there were no means by which an articled clerk could acquire a knowledge of the law, except what he was able to learn in his master's office. In that year the Incorporated Law Society instituted lectures in the different branches of the common law, equity, and conveyancing, which have been continued to the present time.

Until 1836 no formal examination was required to be passed by persons seeking admission to practice as attorneys or solicitors at the termination of their articles. In that year rules of court were made by the judges, under which persons applying for admission as attorneys were required to pass an examination before a certain number of members of the Council of the Law Society; and in 1837 the Master of the Rolls made a similar order for the examination in equity of solicitors.

In 1843 the act of 6 and 7 Vict., Cap 73, formally empowered the judges to make regulations for the conduct of these examinations, and provided for the punishment of unqualified persons encroaching on the profession.

In August, 1846, a select committee of the House of Commons, appointed in the previous April, to inquire into the state of legal education, made its report, which extended over 400 folio pages.

This report recommended that a stringent *preliminary* examination should be required in general knowledge previous to apprenticeship, and that such examination should embrace, in addition to the so-called commercial education, a competent knowledge of, at least, Latin, geography, history, the elements of arithmetic and ethics, and one or more of the modern languages.

In 1854, the Incorporated Law Society, with the view of carrying the recommendations of the parliamentary committee into effect, took steps toward the establishment of a preliminary examination in general knowledge.

The Society succeeded in securing the passage of the act of 23 and 24 Vict., Cap 127, under which an examination in general knowledge, prior to entering into articles of clerkship, was expressly authorized to be held.

As observed in the interesting introduction to the "Supplement to the Calendar and Law Directory of the Incorporated Law Society" for 1891, "The Society felt that, as solicitors have to advise clients in all ranks of society, from the highest to the lowest, on all sorts of questions, some of them of the most difficult and delicate nature, it was obvious that their efficiency and usefulness would be much increased if their *general*, as well as legal, attainments were such as to command respect and attention. It would also be for the benefit of the public at large that solicitors should not only possess professional skill but also those advantages which science, literature, and languages are calculated to confer. The Society, therefore, strongly urged the establishment of an examination in science, literature, and the classics."

Up to 1860 only the final examination was required to be passed, but under an act of Parliament of that year an intermediate examination was held, as well as the *preliminary* examination.

In 1879 the *honors* examination was instituted for solicitors.

The Solicitors' Act of 1877 (40 and 41 Vict., Cap 25) placed the entire practical control of the preliminary, intermediate, and final examinations in the hands of the Incorporated Law Society, which thus acquired by right that which it had before enjoyed only by the favor of the judges.

A few facts may be stated with regard to these several compulsory examinations prescribed by law for persons seeking to become solicitors.

1. It is necessary for a candidate to pass the preliminary examination before he has the right to enter into articles of clerkship, unless he is a graduate of a university, a barrister at law, or has successfully passed one of the designated examinations at certain specified universities which exempt from the examination, or has obtained from the Lord Chief Justice or the Master of the Roll a dispensing order.

The subjects for preliminary examination are:

(1) Writing from dictation.

(2) Writing a short English composition.

(3) *a* The first four rules of arithmetic, simple and compound; the rule of three, and decimal and vulgar fractions. *b* Algebra, up to and including simple equations, and the first four books of Euclid.

(4) Geography of Europe and the history of England.

(5) Latin, elementary.

(6) Any two languages, to be selected by the candidate out of the following six: (1) Latin, (2) Greek, (3) French, (4) German, (5) Spanish, (6) Italian.

The candidate is not obliged to take up algebra or Euclid, but if he elects to do so, he may take up these with one of the six languages.

The examinations are conducted by an examination committee of the Incorporated Law Society assisted by paid examiners, and it is necessary only to glance over the specimens of questions set for the preliminary examinations during 1890-'91, as published in the supplement to the Law Society's calendar, above referred to, to perceive that the candidate who successfully passes such an examination must be a person of good education and very considerable acquirements.

If the committee are satisfied as to the proficiency and fitness of a candidate at a preliminary examination, they certify the fact to the Council of the Law Society in the form of a report of the result of such examination, and the Council may thereupon resolve that a certificate, signed by the president of the Society, shall be delivered to the candidate. After this certificate has been obtained, articles can be entered into at any time. A solicitor can not have more than two articulated clerks at the same time. This is for the purpose, apparently, of limiting the number of solicitors.

2. After an articulated clerk has served half the time of service required under his articles, he must undergo the intermediate examination in such elementary works as may be selected by the Council of the Law Society. One of the standard works for many years has been Stephen's Commentaries on the Law of England.

Four intermediate examinations are held in each year, one in each of the months of January, April, June, and November, in the hall of the Law Society. If a candidate fails to pass an intermediate examination within twelve months after his half term of service, his final examination is postponed for a fixed period.

3. The next step is to pass the final examination to which articulated clerks are subject, in the following topics:

(1) The principles of the law of real and personal property, and conveyancing.

(2) The principles of law and procedure in matters usually determined or administered in the Chancery Division of the High Court of Justice.

(3) The principles of law and procedure in the Queen's Bench Division of the High Court of Justice; the law and practice of bankruptcy.

(4) The law and practice of probate and divorce; the law and practice of admiralty; criminal law and practice; proceedings before justices of the peace.

4. The subjects for the honors examination are the same, only the questions are more difficult.

Three courses of lectures on common law, equity, and conveyancing are delivered annually at the Society's hall, in London; and, in connection with these lectures, classes are conducted and examinations held under the superintendence of the instructors.

It is stated that the example set by the body of solicitors of establishing an efficient system of examination and lectures led to the adoption of like measures by the four great Inns of Courts, "the noblest nurseries of humanity and liberty in the kingdom."

The committee has received from England copies of the consolidated regulations of the several Societies of Lincoln's Inn, the Middle Temple, the Inner Temple and Gray's Inn, as to the admission, education, and examination of students, the calling of students to the bar, and the taking out of certificates to practice under the bar, for 1892, and other documents showing the courses of study and examinations prescribed by the Council of Legal Education of the Inns of Courts, which may be printed with this report for the information of the association.

The council of legal education consists of twenty benchers, five from each inn of court, and to this body is intrusted the power and duty of superintending the education and examination of students for the purpose of being called to the bar, or of practicing under the bar.

The general rule is that persons seeking to be admitted as students in an inn of court must, before such admission, satisfactorily pass an examination in the following subjects: (a) The English language; (b) the Latin language; (c) English history.

No student can be called to the bar unless he shall, to the satisfaction of the council of legal education, have passed a public examination for the purpose of ascertaining his fitness to be called to the bar.

An examination in Roman law, and in prescribed heads of the English law, is obligatory for call to the bar; but the council may accept as an equivalent for examination in Roman law: (a) A degree granted by a university for which the qualifying examination included Roman law; (b) a certificate that any student has passed any such examination, though he may not have taken the degree for which such examination qualifies him; and (c) the *testamur* of the public examiners for the degree of civil law at Oxford that the student has passed the necessary examination for the degree of bachelor of civil law: *Provided*, That the Council is satisfied that the student, before he obtained his degree, or obtained such certificate or *testamur*, passed a sufficient examination in Roman law.

The general subjects for instruction and examination, under the direction of the council of legal education, are:

1. Roman law and jurisprudence, and international law, public and private.

2. Constitutional law and legal history.

3. English law and equity:

(a) Law of persons: Marriage and divorce; infancy; lunacy; corporations.

(b) The law of real and personal property and conveyancing: Trusts, mortgages, administration of assets on death, on dissolution of partnerships, on winding up of companies, and in bankruptcy; practical instruction in the preparation of deeds, wills, and contracts.

(c) Law of obligations: Contracts; torts; allied subjects (implied or quasi-contracts, estoppel, etc.); Commercial law, with especial reference to mercantile documents in daily use, which should be shown and explained.

(d) Civil procedure, including evidence.

(e) Criminal law and procedure. Examinations for call to the bar are by written papers, and by such *viva voce* questions as the examiners may think desirable.

The council may grant certificates of honor to such persons as may be reported worthy of the same by the examiners.

A student who, previously to his admission at an Inn of Courts, was a solicitor in practice for not less than five years (and has ceased to be a solicitor before his admission as a student), may be examined for call to the bar, without keeping any term, and may be called to the bar upon passing the public examination, without keeping any term.

The educational advancement of the lower branch of the legal profession in England, among other causes, will no doubt sooner or later lead to the abolition of the distinction of rank between solicitors and barristers-at-law; but whether such a change will be a gain to the profession and the public, time alone will show.

One great safeguard of the profession in England is the fact that it has not ceased to be, or to be regarded as, a learned profession, and has not become a mere business occupation, which may be taken up by almost everybody as a livelihood upon the most imperfect preparation for its duties and responsibilities.

The profession stands apart from ordinary business, with a spirit sensitively alive to whatever concerns the honor and best interests of its members, and it is thus measurably protected against the encroachment of unworthy and incompetent persons, while it is accorded by the public a degree of respect and consideration which renders membership in it a sensible and gratifying distinction.

The discipline of the more numerous branch of the legal profession in England is regulated and maintained under provisions of statutes carefully framed with a view to the interest not only of the profession itself, but also of the public at large as deeply concerned in the conduct of legal practitioners.

Stipulations for the sale by the client, either wholly or partially, of his interest in any action, or for the payment only in the event of success, are wholly void.

The solicitor's remuneration act of 1881 provides for the compensation of solicitors in conveyancing and other non-contentious business according to the general principle of fixed *ad valorem* percentages, so as to get rid of detailed bills of costs for this class of work.

The rates are established by a general order of the Lord Chancellor, the Lord Chief Justice of England, the Master of the Rolls, the President of the Incorporated Law Society, and the president of one or more of the provincial law societies, or associations, and the regulations and provisions proposed to be embodied in any general order on the subject of remuneration are communicated to the council of the incorporated law society, who are at liberty to submit observations and suggestions in respect thereto.

Overcharging, as well as undercharging, in such business is thus rendered impossible.

The Solicitor's Act of 1888 provides for the custody of the roll of solicitors of the supreme court in England by the Incorporated Law Society, and carefully regulates the subject of striking solicitors off the roll.

An application to strike a solicitor off the rolls, or an application to require him to answer allegations in an affidavit, is referred by the master of the rolls to a committee of not less than three nor more than seven members of the society, who, after hearing the case, are required to embody their finding in the form of a report to the high court of justice.

If the committee are of opinion that there is no *prima facie* case of misconduct against the solicitor, the society need not take any further proceedings; but if the committee are of opinion that there is a *prima facie* case, it is the duty of the society to bring before the court the report of the committee, which has the same effect, and is treated in the same manner, as a report of a master of court, and the court may make such order thereon as it sees fit.

The Incorporated Law Society is thus constituted by law not only a faithful leader, but the watchful guardian of the honor and the best interests of the legal profession.

II. COURSES OF STUDY IN LAW SCHOOLS IN 1891.

*Statistics, subjects taught, text-books used, and time allotted, as far as reported in the catalogues of the institutions; with some remarks concerning their organization and methods of instruction.*¹

1. *Albany Law School (Union University)*, Albany, N. Y., Lewis B. Hall, dean. Twelve instructors, 41 students, 18 having degrees in letters or science, 36 graduates, 38 weeks in school year 1891-'92. Students must attend one course of three full terms.

2. *Law Department of Allen University*, Columbia, S. C. One instructor, 11 students, 32 weeks in school year. Has a course of 2 years.

3. *Law School of the Indiana University*, Bloomington, Ind., David D. Banta, dean. Two instructors, 61 students, 5 having degree in letters or science, 16 graduates, 37 weeks in school year.

Course of study: First year.—Elementary law (Robinson's, with notes and collateral reading), 39 hours; constitutional law (Cooley's, and study of leading cases), 26 hours; contracts (Anson, with notes and study of cases), 65 hours; contracts (Recitation in Parsons, with notes and cases), 50 hours; personal property, 60 hours; international law, 10 hours; domestic relations, 30 hours; notes and bills, 2 hours; criminal law, 10 hours.

Second year.—Jurisdiction and procedure in equity (Bispham's Principles and Lube's Equity Pleading), 65 hours; common-law pleading (Stephens'), code pleading, 65 hours; real property (Tiedeman, with notes and cases, and practice in the examination of titles), 50 hours; wills and administration, 10 hours; evidence (Stephens'), 30 hours; pleading and practice, 20 hours; corporations (Morawetz), 50 hours; torts, 30 hours; pleading and practice, 20 hours.

Organization and methods of instruction.—Examinations for admission are not technical, but are intended to test applicant's knowledge of the common-school branches, and especially his ability to write the English language easily and correctly. Instruction is given by text-books, lectures, and study of leading cases. The last feature is especially emphasized, the object being to acquaint the student with the leading cases in each of the more important branches of the law.

4. *Boston University School of Law*, Boston, Mass. Edmund H. Bennett, dean.—Twenty-five instructors; 210 students, 50 having degree in letters or science; 62 graduates; 35 weeks in school year.

Course of study: First year.—Contracts (required), 125 hours; torts (required), 120 hours; sales (required), 30 hours; agency (required), 20 hours; criminal law (required), 25 hours; development of law, 25 hours; history of the common law, 10 hours.

Recommended: Benjamin, Bishop, Metcalf, Anson, or Smith on contracts; Bigelow, Cooley, or Pollock on torts, or Bishop on noncontracts; Benjamin on sales; May or McClain on criminal law; Meechem or Story on agency.

Second year.—Bailments (required), 20 hours; bills and notes (required), 75 hours; domestic relations, 10 hours; insurance, 15 hours; landlord and tenant (required), 10 hours; Massachusetts conveyancing, 10 hours; partnership (required), 10 hours; real property (required), 140 hours. Books used: Williams, Washburn or Tiedeman on Real Property; Schouler, Bailments, Chalmers's Digest (Benj. edition) on Bills; Bigelow's Leading Cases or Bills and Notes; Story on Partnership; Schouler's Domestic Relations; Taylor's Landlord and Tenant.

Third year.—Equity jurisprudence, including trusts (required), 100 hours; equity pleading (required), 20 hours; evidence (required), 70 hours; jurisdiction and practice of the United States courts (required), 15 hours; law of railroads, 20 hours; pleading and practice at common law (required), 50 hours; wills (required), 15

¹ Prepared by Mr. Wellford Addis.

hours. In addition to the studies above-mentioned, lectures are given before the senior class each year on several of the following topics: Admiralty and shipping, 10 hours; conflict of law, 15 hours; constitutional law, 10 hours; constitutional legislation, 10 hours; corporations, 10 hours; damages, 10 hours; law of elections, 6 hours; medical jurisprudence, 10 hours; Massachusetts practice, 12 hours; American statute law, 20 hours; patent law, 10 hours; parliamentary law, 10 hours. Books used: Bispham or Bigelow's Equity, Vol. 1, Greenleaf's Evidence; Stephen's Digest (Chase's edition); Stephen's or Gould's Pleading; Best's Evidence (Chamberlayne's edition); Story's Equity Pleadings; Curtis's Jurisdiction of United States Courts.

Methods of instruction.—The course of instruction includes the regular oral text book exposition and recitation, free and written lectures, reviews, examinations, exercises in drafting contracts, conveyances, pleadings, indictments, and other legal papers, the criticism of briefs, and arguments in moot courts, courses of reading, etc. The importance of the study of judicial authority, especially the cases referred to in the lectures and recitations, is urged.

5. *Buffalo Law School of the University of Buffalo*, Buffalo, N. Y. Charles Daniels, dean.—Twenty-two instructors; 60 students, 13 having degree in letters or science; 21 graduated; 33 weeks in school year.

Course of study: First year.—Elementary law and contracts, criminal law and procedure, torts, practice in civil actions, marriage and divorce, domestic relations, transmission of estates.

Second year.—Law of property, evidence, equity jurisprudence, and pleading, sales, agency and partnership, corporations, negotiable bills and notes, medical jurisprudence, maritime and admiralty law, constitutional law, legal ethics, trial of actions, special proceedings, manufacturing corporations, wills and estates of deceased persons.

Methods of instruction.—Instruction is given by means of lectures, recitations, and especially by the study of leading cases. Moot courts are held.

6. *Law Department of Central Tennessee College*, Nashville, Tenn.—Three instructors, 8 students, 4 graduates, 36 weeks in school year. Has a course of two years.

7. *Law School of the Cincinnati College*, Cincinnati, Ohio. Jacob D. Cox, dean.—Six instructors; 161 students, 35 having degree in letters and science; 83 graduates; 33 weeks in school year.

Course of study: First year.—Elementary law, contracts, real property, Blackstone's commentaries, Anson's contracts, Bliss on code pleading.

Second year.—Pleadings and civil procedure, torts, real property, equity jurisprudence, mercantile law and contracts, evidence, court law, criminal law, corporations, statute law. Books used: Stephen's Pleading, Bliss's Code Pleading, Bigelow's Torts, Williams' Real Property, Bispham's Equity, Kent's Commentaries, Greenleaf's Evidence, Stephen's Evidence, Cooley's Constitutional Law, May's Criminal Law.

Methods of instruction.—The daily exercises consist of lectures and recitations from standard text-books. Leading cases and collateral, authorities on the subjects under consideration are referred to by the professor, and at the succeeding recitation the class will be examined upon the whole matter of text and comment. Moot courts are held each week during the year.

8. *School of Law of Columbia College in the city of New York*, N. Y. Theodore W. Dwight, dean.—Nine instructors, 625 students, 63 graduates, 32 weeks in school year.

Course of study: First year.—Required: Contracts, 102 hours (Keen's selections); real and personal property, 68 hours (Gray's cases); torts, 48 hours (Burdick's cases); criminal law and procedure, 54 hours (Chaplin's cases); law of persons and domestic relations, 32 hours (Ewell's cases, students' edition); common law pleading and procedure, 36 hours (Ames's cases); elements of jurisprudence, 10 hours. Optional: Constitutional history of Europe and the United States, 136 hours; constitutional history of England, 68 hours; institutes of Roman law, 34. In the first year the required work for a degree is 340 hours, *i. e.*, 10 hours a week.

Second year.—Contracts and quasi-contracts, 102 hours (Keener's selections on contracts and cases on quasi contracts); administrative law, 68 hours; bailments, 68 hours; equity jurisprudence, 68 hours, (Ames's cases on trusts); history of European law, 68 hours; real and personal property, 68 hours (Gray's cases); agency, 36 hours; code practice, comparative constitutional law, 72 hours, (Burgess's political science and constitutional law); equity pleading and procedure, 40 hours; insurance, 36 hours (Richard's treatise and select cases); sales of personal property, 40 hours, (Benjamin's sales). Optional: Medical jurisprudence. The courses of the second year are elective. The required work for the degree during the year is 408 hours.

Third year.—Code pleading and practice, 68 hours; private corporations, 68 hours (Cummings's cases); equity jurisprudence, 68 hours (Langdell's cases); evidence, 68 hours (Thayer's cases); international law, 68 hours; negotiable paper, 68 hours (Ames's cases on bills and notes); partnership, 68 hours (Ames's cases); suretyship and mortgage, 68 hours; systematic jurisprudence, 68 hours; wills and administration, 68 hours (Gray's cases on property); admiralty and shipping, 36 hours; conflict of private law, 40 hours; municipal corporations, 40 hours; law of taxation, 36 hours. Optional: Conflict of criminal law, extradition and nationality, 36 hours. The courses in the third are elective. The work required for the year is 340 hours.

Admission and methods of instruction.—Applicants for admission must have received a good academic education, including a knowledge of the Latin language as is required for admission to the freshman class of the school of arts. The examination to ascertain this is waived in the case of graduates of literary colleges. Moot courts are held each week.

9. *Law Department of Cornell University, Ithaca, N. Y.* Douglass Boardman, dean.—Fourteen instructors; 152 students, 3 having degrees in letters or science; 37 graduates; 35 weeks in school year.

Course of study: First year.—Elementary law (Blackstone), contracts, agency, criminal law and procedure, torts, domestic relations, law of real property, evidence, bailments, common law pleading and practice in cases at law, civil procedure under the code, English constitutional history. The regular class instruction of the schools is at no time less than 15 hours a week for each class.

Second year.—Private and municipal corporations, wills and administration, mercantile law, evidence, real property, equity jurisprudence, equity pleading and procedure in State and United States courts, civil procedure under the codes, chattel mortgages, mechanics' liens, assignments for the benefit of creditors, practical suggestions concerning the preparation, trial, and argument of causes, Roman law, international law, American constitutional history, American constitutional law. The regular class instruction is at no time less than 15 hours a week for each class.

Note: Course of special lectures is given apparently during the two years as follows: The statute of frauds and fraudulent conveyances (two courses), constitutional law (two courses), shipping and admiralty, patent laws of the United States, medical jurisprudence, law of insurance, extradition. Opportunities are given the students for instruction in elocution and oratory.

Admission and methods of instruction.—There is an examination for admission as required by the law of the State of New York.

The instruction is carried on by lectures and examinations, by oral text-book exposition and recitations, and by the study of selected cases. Instruction to the more advanced students by means of the study of cases is made a special feature of the school. A session of the university court is held, as a rule, each week during the school year.

10. *School of Law of Chaddock College, Quincy, Ill.* Thomas R. Petrie, secretary.—Four instructors; 12 students, 1 having degree in letters or science; 1 graduate; 36 weeks in school year.

Course of study: First year.—Criminal law, torts, real estate, equity, contracts, constitutional law.

Second year.—Common law, pleading and practice, mercantile law, evidence, corporations.

Admission and methods of instruction.—Applicant for admission is examined if unable to present a college diploma from an institution of collegiate or academic grade. The instruction is given by lecture and recitation. Moot courts are held at convenient times.

11. *Law School of the Columbian University*, Washington, D. C., H. G. Hodgkins, registrar. Twelve instructors, 383 students, 63 having degree in letters or science, 160 graduates; 35 weeks in school year.

Course of study: First year.—Real and personal property, contracts, crimes and misdemeanors, three times a week. Blackstone, Kent, Parson's Contracts, Byles on Bills. Also lectures on domestic relations, commercial paper and torts.

Second year.—Pleading, evidence, equity jurisprudence, pleading and practice, partnership, with lectures on ejectments, quo warranto, etc., three times a week. Also a course of lectures on constitutional law, law of corporations, international law, civil law, patents. These are open to students of first year. The lectures on constitutional law are given every Saturday. Books used: Stephen's Pleading (Tyler's edition), Greenleaf's Evidence, Smith's Manual of Equity, and Mitford and Tyler's Pleading and Practice in Equity.

Third year.—[Graduate course in practice] Cox's Exercises for Law Students, Archbold's Law of Nisi Prius, Mitford's and Tyler's Equity Pleading and Practice. Also lectures on jurisdiction, practice and peculiar jurisprudence of the courts of the United States, and also on criminal law, legal bibliography, practical commercial law, and the history of law. The last three courses are open to all classes of the school.

Organization and methods of instruction.—The school has three classes, to wit, Junior, senior, and graduate classes in practice. In the junior class a lesson is assigned in the text-book which forms the subject of the professor's lecture. In the lecture the professor brings out the points of the text, and then quizzes the class upon both text and lecture. In the senior class the method is the same with the exception that the quizzing occurs at the meeting following that upon which the lecture was given. This method of course does not apply to the lectures on constitutional law, civil law, etc. In the graduate class for more than half the time the exercises are those of a nisi prius moot court.

12. *Law School of Cumberland University*, Lebanon, Tenn., N. Green, dean. Three instructors, 71 students, 52 graduates, 40 weeks in school year.

Course of study: First year.—Caruther's History of a Lawsuit, Kent's Commentaries, Vols. I, II, III, Field's Corporations, Cooley's Torts, Greenleaf's Evidence, Vol. I, Stephen's Pleading.

Second year.—Kent's Commentaries, Vol. IV, Barton's Suit in Equity, Strong's Equity Jurisprudence, Parson's Contracts, Wharton's Criminal Law. (This course, as given for two years, may be completed in ten months).

Method of instruction.—Moot courts are held.

13. *School of Law of De Pauw University*, Greencastle, Ind., Augustus L. Mason, dean. Seven instructors, 48 students, 9 having degree in letters and science, 19 graduates, 38 weeks in school year.

Course of study: First year.—Elementary law, sources of law and philosophy of legal history, domestic relations, personal property, contracts, agency, bailments, partnership, negotiable instruments, torts, pleading and practice, statutory construction, international law. Each student needs the statutes of his own State. Juniors entering at the beginning of the junior year need Blackstone's Commentaries.

Second year.—Law of real property, equity jurisprudence, constitutional jurisprudence of the United States, wills and decedents, estates, evidence, criminal law, pleading, practice and advocacy, mercantile guaranty and suretyship, patents and copyrights, private corporations, railroads, express and telegraph companies, banks,

building associations, insurance companies, municipal corporations. Seniors are expected to attend junior lectures.

Methods of instruction.—The work is largely conducted by lectures. Moot courts are held, during a large part of the course, by the dean.

14. *School of Law, Georgetown University*, Washington, D. C., Martin F. Morris, dean. Ten instructors, 268 students, 132 graduates, 34 weeks in school year.

Course of study: First year.—Personal property, torts, domestic relations, criminal laws, real estate, contracts, bills and notes, 4 times a week during school year. Books used: Blackstone's Commentaries, Schouler's Personal Property, Vol. 1, Bishop's Contracts, Byles' Bills, Cooley's Torts, Williams' Real Property, Browne's Domestic Relations. To relieve the embarrassment of those who find a knowledge of the Latin language essential to the study of law, a course in Latin has been established in the law school by the classical department of the university.

Second year.—Real estate, contracts, bills, and notes. Twice a week during the year. Pleading, practice evidence, equity pleading and practice, moot court three times a week during year. Books used: Stephen's Pleading, Cox's Practice, Greenleaf's Evidence Vol. 1, Adams's Equity, Barton's Suit in Equity.

Third year (post-graduate course).—Pleading, practice, evidence, equity, equity pleading and practice, moot courts, three times a week during year. Partnership, corporations, constitutional and international law, admiralty and comparative jurisprudence, conveyancing, office practice, etc., twice a week during year. Special lectures: Statutory law, testamentary law, once a week during year. Books used: Sedgwick's Statutory and Constitutional Law, Paschal's Annotated Constitution, Story's Partnership, Boone's Corporations.

Organization and methods of instruction.—School has a junior, senior, and post-graduate course of study. The system of instruction is as follows: A lesson averaging from thirty to forty pages of the text-book is assigned in advance, which the student is expected to master. During the recitation hour the lecturer goes over this ground, and then quizzes the class. Thus, the student has three opportunities of becoming familiar theoretically and practically with each topic treated in the course. The moot court is divided into a circuit court and a court of appeals, the former holding two regular sessions weekly, the latter sits once a month.

15. *Law School of Harvard University*, Cambridge, Mass., C. C. Langdell, dean. Nine instructors, 363 students, 41 graduates, 36 weeks in school year.

Course of study: First year.—Contracts, 108 hours; criminal law and procedure, 72 hours; property, 72 hours; torts, 72 hours; civil procedure at common law, 36 hours. Books used: Langdell's Cases on Contracts; Chaphin's Cases on Criminal Law; Grey's Cases on Property, Vols. 1 and 2; Ames's Cases on Torts; Ames's Cases on Pleading.

Second year.—Agency, 72 hours; bills of exchange and promissory notes, 72 hours; law of carriers, 72 hours; contracts, 72 hours; evidence, 72 hours; jurisdiction and procedure in equity, 72 hours; property, 72 hours; sales of personal property, 72 hours; trusts, 72 hours. Books used: Ames's Cases on Bills and Notes, Kener's Cases on Quasi-Contracts, Langdell's Cases in Equity Pleadings, Grey's Cases in Property, Vols. 3 and 4, Langdell's Cases on Sales, Ames's Cases on Trusts.

Third year.—Constitutional law, 72 hours; corporations, 72 hours; jurisdiction and procedure in equity, 72 hours; partnership, 72 hours; property, 72 hours; surety and mortgage, 72 hours. Books used: Ames's Cases on Partnership, Gray's Cases on Property, Vols. 5 and 6.

Extra courses.—Patent law, 10 lectures; peculiarities of Massachusetts law and practice, 2 hours a week.

Admission and methods of instruction.—Applicants for admission not graduates of a college are examined in Latin (Cæsar, Cicero), Blackstone's Commentaries. The character of the instruction is shown in a general way by the text-books used. Every student who has been in the school one year or more has an opportunity each year of arguing in a case before one of the professors in a moot court.

16. *Hastings College of the Law, University of California*, San Francisco, Cal. C. F. Dio Hastings, dean. Six instructors, 92 students, 15 graduates, 39 weeks in school year.

Course of study: First year.—Persons and personal rights, during a portion of the year; real property, during a portion of the year; contracts, during a portion of the year. Books used: Pomeroy's Municipal Law, Blackstone's Commentaries, Kent's Commentaries, Cooley's Torts, Schouler's Domestic Relations, Bishop's Contracts, Tiedeman's Real Property.

Second year.—Mercantile law, 5 times a week (lectures and recitations) during greater portion of the year, wills and decedents' estates, lectures and recitations during portion of the year. Books used: Benjamin's Sales, Schouler's Bailments, Tiedeman's Commercial Paper, May's Insurance, Story's Agency, Bates's Partnership, Morawitz's Corporations, Schouler's Wills, Code of Civil Procedure, Title Proceedings in the Probate Court.

Third year.—Equity jurisprudence, recitation twice a week during a portion of the year; evidence, recitations twice a week during a portion of the year; pleading and practice, recitations, discussions, and practical exercises three times a week throughout the year; constitutional law, recitations twice a week during a portion of the year; legal ethics, 8 or 10 lectures to class. Books used: Stephens on Pleading, Lube's Equity Pleading, Bliss on Code Pleading, Code of Civil Procedure, Greenleaf's Evidence, Pomeroy's Equity Jurisprudence and Constitutional Law. Lectures on special subjects are given and leading cases are constantly referred to and are required to be studied.

Admission and methods of instruction.—Applicant must pass an examination in English, arithmetic, algebra, plane geometry, history and geography, Caesar (Books I-IV). There is a moot court upon which the second and third year students are required to attend.

17. *Law Department of Howard University*, Washington, D. C. B. F. Leighton, dean. Six instructors, 74 students, 33 graduates, 32 weeks in school year.

Course of study: First year.—Blackstone's Commentaries, Williams's Real Property, Browne's Domestic Relations, Boone's Real Property, Parsons Contracts, Byler's Bills.

Second year.—Stephen's Pleading, Cox's Criminal Law Practice, Adams's Equity Jurisprudence, Bishops' Criminal Law.

18. *Little Rock Law Class in connection with Little Rock University*, Little Rock, Ark. Three instructors, 30 students, 1 graduate, 12 weeks in school year. Course of study two years.

19. *Law Department of McKendree College*, Lebanon, Ill. W. W. Edwards, dean. One instructor, 25 students, 3 graduates, 36 weeks in school year.

Course of study: First year.—Blackstone's Commentaries, books 1 and 2; lectures on Constitutional History, English and American, 13 weeks. Blackstone's Commentaries, books 3 and 4; Washburn's Criminal Law; Lectures on American Constitutional Law 11 weeks. Walker's American Law, Gould's Pleading, General Review of Blackstone, 10 weeks.

Second year.—Bishops' Contracts; Kent's Commentaries, Parts I-IV; lectures on pleadings, 13 weeks. Tiedeman's Real Property, Kent's Commentaries, Parts V-IV; Lectures on International Law, 11 weeks. Cooley's Torts, Greenleaf's Evidence, Story's Equity Jurisprudence, 10 weeks.

Organization and methods of instruction.—Applicants for admission to the Junior Class must pass a satisfactory examination in the studies required for admission to the Freshman Class in the Scientific Department of the college. Daily recitations are had and the lectures are an important feature of the work. A complete system of moot courts is maintained.

20. *Law Department of the National University*, Washington, D. C. Eugene D. Carusi, dean. Eight instructors, 115 students, 32 weeks in school year.

Course of study: First year.—Real and personal property, contracts, negotiable instruments, criminal law, constitutional law, bailments, domestic relations. Blackstone's Commentaries, Williams's Real Property (with references to Kent), Smith's Contracts (with references to Anson), Ralston's Discharge of Contracts, Benjamin Chalmers's Digest of the Law of Bills and Notes (with references to Byles).

Second year.—Equity jurisprudence, pleading, torts, constitutional law, Federal jurisprudence and practice. The members of this class are also expected to attend the exercises of the class of the first year. There is also a special course in patent law and one in practice, open to all students in the school. Moot court optional. Cooley's Torts, Stephen's Pleadings, Greenleaf's Evidence, Vol. I, Adams's Equity, Walker's Patent Law.

Third year.—(Post-graduate course.)—Mercantile law, criminal law, applied evidence, constitutional law, practice in moot court. The members of this class are required to attend the exercises of the senior class. Smith's Mercantile Law, Greenleaf's Evidence, second and third volumes, Paschal's American Constitution, Cox's Practice.

Organization and methods of instruction.—The school has junior, senior, and post-graduate classes. Each class is provided with a professor who devotes himself exclusively to its instruction, maintaining a constant system of oral examinations. The students pursue a regular course of reading and are called upon to note the substance of what they have read. What is deemed of peculiar advantage in this law school is the method of teaching, "which is entirely Socratic." Two moot courts are held each week, one for motions, etc., and the other for the arguments of the questions of law and trials of factitious suits. There is also a court of appeals.

21. *Law Department of the State University of Iowa, Iowa City, Iowa.* Nine instructors, 174 students, 32 having degrees in letters or science, 73 graduates, 36 weeks in school year.

Course of study: First year.—Legal study and ethics, 1 week; elementary law, 9 weeks; contracts, 10 weeks; pleading, 5 weeks; study of cases, 4 weeks; criminal law, 3½ weeks (McClain's outlines), torts 9 weeks, (Cooley's); domestic relations, 3 weeks; trial and judgment, 4½ weeks; evidence, 2 weeks; evidence, 5 weeks (Vol. I, Greenleaf's); sales, bailments, and pledges, 5½ weeks; negotiable instruments, 5 weeks; Benjamin's Chalmers's bills, notes, and checks; probate law and procedure, 4½ weeks.

Second year.—Real property, 10 weeks (Tiedeman's); insurance, 4 weeks; chattel mortgages, 4 weeks; carriers, 4 weeks; damages, 4 weeks; patents, 2 weeks; equity and equity pleading, 11 weeks (Bispham); corporations, 3 weeks; medical jurisprudence, 2½ weeks; appellate proceedings, 1 week; agency, 1 week; criminal procedure, 3½ weeks (McClain's outline); partnership, 4½ weeks; Federal jurisprudence and admiralty, 2 weeks; constitutional law, 7½ weeks (Cooley's); constitutional limitations, 1 week; attachment, garnishment, and execution, 3 weeks; justice practice.

Third year.—Note to the course of two years: If the faculty permit, the student may take the following courses: Roman Law (given during 1892-'93), History of Constitutional Law in the United States (not given during 1891-'92), State Law (open to seniors only when three or more apply for a course in the law of a particular State).

Organization and methods of instruction.—Applicants not graduates of a higher or secondary institution, or not possessed of a teacher's certificate, must pass an examination in English language and history, and American history. Instruction is given by means of lectures, text-books, and the study of cases. Two moot courts are conducted in curriculum with the exercises of the school.

22. *St. Louis Law School of Washington University, St. Louis, Mo.* William G. Hammond, dean. Eight instructors, 81 students, 23 having degrees in letters or science, 21 graduates; 34 weeks in school year.

Course of study: First year.—Real property, personal property (including sales and bailments), personal property and obligations arising from torts, contracts, causes of action between tort and contract, negotiable contracts in their simple forms. A daily course of lessons upon elementary law, both civil and criminal, until Christmas vacation. There are also two recitations in Bishop on Contracts. Pleading is taught in its code form with weekly exercises in the pleading of cases in the moot court. After the vacation pleading is continued, and Greenleaf's Evidence, Vol. 1, taken up. Contracts as dealing with bills and notes is continued, and Cooley's Torts taken up, as also Tiedeman's Real Property, Benjamin's Sales, and Schouler's Bailments.

Second year.—Common law pleading, equity pleading, corporations, domestic relations, agency, partnership, negotiable paper, insurance, surety and guaranty, special forms of tort, equity and equitable estates, real property and mortgage, constitutional law and limitations, the law of decedent's estates.

Before Christmas vacation the class studies Tiedeman's Real Property, and Stephen's Common Law Pleading, and attends a course of lectures on agency. After the vacation the class studies Bispham's Equity, Parson's Partnership, Taylor's Corporations, May's Insurance, Woerner's Administration, Cooley's Constitutional Limitations, and attends lectures on domestic relations, law of successions, and the history of the common law, and pursues a course of instruction in the practice of the Federal courts.

Third year (advanced class).—Chapters III and IV of Pomeroy's Remedies and Remedial Rights in connection with practical exercises in pleading, until the class has gone over the entire field of actions. Washburn's Easements, Dillon's Municipal Corporations, Best's Evidence, and Story's Conflict of Laws. Moot courts. Room is left for special subjects, such as the Elements of the Roman Law.

Admission and methods of instruction.—An examination for admission is held. This is directed chiefly to the fundamental elements of education. The course is of two years with the option of a post-graduate course. The method of instruction is by lecture and recitation from text-books. A moot court is held weekly.

23. *Law Department of the University of Notre Dame*, Notre Dame, Ind. William Haynes, dean. Thirteen instructors, 35 students, 7 having degree in letters or science, 10 graduates, 40 weeks in school year. No course of study given.

Organization and methods of instruction.—A preliminary examination is held to ascertain that the applicant has a fair general education and can accurately write the English language. There are two courses in the school, one of three the other of two years duration, which practically are the same, though the shorter course is for more mature students. The chief methods of instruction consist in the delivery, daily, of two lectures, the taking of notes by the students, the subsequent reading by them of the decisions cited in the notes, the study of standard elementary text-books, the analysis and recitations in substance of the most important leading cases, oral examinations daily, and written examinations weekly, the trial of actions at law and suits in equity in the moot court, and debates and exercises in public speaking at least once a week.

24. *Law Department of the Tulane University of Louisiana*, New Orleans, La. Henry Carleton Miller, dean. Six instructors, 49 students, 26 weeks in school year.

Books used: First year.—Kent's Commentaries; Woolsey's International Law; Wheaton's International Law; Conklin's United States Admiralty; Civil Code of Louisiana and Code of Practice; Cooper's Justinian; Laurent's Cours de Droit Civil; Marcadé on the French Code, or Mourlon's Répétitions Ecrites; Blackstone's Commentaries; Story's Equity Jurisprudence; Smith's Manual of Equity; Smith's Mercantile Law; Story's Bills of Exchange and Promissory Notes; Abbot on Shipping; Arnould on Insurance, and Greenleaf on Evidence.

Remarks: The degree will be conferred on those students only who shall have attended two full courses of lectures, or one full course after having pursued their

studies for the term of twelve months under a respectable counselor at law. The provisions of the code of Louisiana having been mainly derived from the civil law, the study of this law becomes necessary.

25. *Northwestern University Law School* (Union College of Law), Chicago, Ill. Henry W. Blodgett, dean. Thirty-four instructors, 264 students, 74 graduates, 36 weeks in school year.

Course of study: First year.—Practice in cases at law, contracts, bailments, agency; criminal law and procedure; personal property; real estate (fixtures and easements); code practice; private corporations and trials; law of express, telegraph, and telephone companies; English constitutional history. In addition to lectures on the foregoing, instruction is given by the use of text-books, as follows: Blackstone's Commentaries; Stephen's Common Law Pleading; Bispham's Equity; Cook's Private Corporations; Tiedeman's Commercial Paper; Anson on Contracts; Edwards' Bailments; Tiedeman's Sales. For text-book work the junior class is divided into two sections, the first reciting from 9 till 10 a. m. on Monday, Tuesday, Wednesday, Thursday, and Friday, the second from 7:30 till 8:30 p. m. on the same days. Lectures to the junior class are given from 4 till 5 p. m.

Second year.—United States constitutional law; Federal jurisprudence; administration and distribution of estates of deceased persons; wills; municipal corporations; constitutional history of the United States; general principles of equity jurisprudence; statute law; practice at law; practice in equity; trusts. In addition to lectures on the foregoing, instruction is given by the use of text-books, as follows: Chitty's Pleadings; Greenleaf's Evidence; Story's Equity Pleadings; Bigelow's Torts; Lindley's Partnership; Bliss's Code Pleading; Tiedeman's Real Property. For text-book work this class is divided into two sections also, the first reciting from 8 till 9 a. m. on Monday, Tuesday, Wednesday, Thursday, and Friday, the second from 8:30 till 9:30 p. m. on the same days. Lectures to the seniors are given from 5 till 6 and from 7:30 till 8:30 p. m.

Third year (post-graduate course).—Comparative constitutional law; public international law; private international law; history of English law; medical jurisprudence; railway law; proceedings in rem; insurance; Roman law; patent law; law of waters; trade-marks and copyrights; interstate commerce. Candidates for the degree of master of laws must, in addition to the foregoing requirements, make themselves thoroughly familiar with Austin's Jurisprudence, High's Extraordinary Legal Remedies, and Cooley's Constitutional Limitations. Furthermore, they are required to prepare a thesis. Instruction in this course is given on Monday, Wednesday, and Friday at 4:30 p. m.

Organization and methods of instruction.—Candidates for admission not graduates of a college or a high school are required to pass examinations in the common school branches, including English history. Students are required to make a careful study of cases and original investigations, the classes being divided into sections for seminary work. Special attention is given to matters pertaining to practice. A common-law practice court is held during the junior and senior years and a chancery practice court in the senior year.

26. *Law School of the University of Alabama*, University post-office. Richard C. Jones, dean (1890-'91). Three instructors, 19 students, 3 graduates, 36 weeks in school year.

Course of study: First year.—International and constitutional law, one lecture a week with special reference to the United States, eleven weeks; Cooley's Principles; Kent's Commentaries; Cooley's Constitutional Limitations; Calhoun's works; Woolsey's Introduction; Wheaton's International Law; Vattel; Wharton's Constitutional Law. Common and statutory law: Walker's American Law; Kent's Commentaries; Stephen's Pleading; Greenleaf's Evidence; selected portions of Blackstone's Commentaries; Bishop's Contracts; Bigelow on Torts; Byles on Bills; Clark's Manual of Criminal Law; Code of Alabama; May's Criminal Law; Bliss' Code Prac-

tice. Equity jurisprudence: Adam's Equity; Mitford's and Tyler's Pleadings and Practice; Code of Alabama; Bigelow's Equity; Longdell's Equity Pleading.

Organization and methods of instruction.—The school has three departments: (1) the school of international and constitutional law; (2) the school of common and statute law; (3) the school of equity jurisprudence.

Lectures are delivered during the course by the professors upon the various branches of the law, in addition to the oral examinations of the classes upon the text-books. Moot courts are presided over by one of the professors of the department, with an occasional substitution of some eminent attorney in full practice and of proper legal acquirements. The academic schools are open to the law students and they are urged to avail themselves of the course in English language and literature as well as in ancient and modern languages offered there.

27. *Law School of the University of Georgia*, Athens, Ga. Andrew J. Cobb, dean. Nine instructors, 14 students, 8 having degree in letters or science, 13 graduates, 40 weeks in school year.

Course of study: First year.—Blackstone's Commentaries; Brown's Commentaries (contract and torts); Constitution of the United States; Constitution of Georgia; Part I of Georgia Code (political organization of the State); Georgia Penal Code; Ewell's Medical Jurisprudence (12 weeks); principles of pleading, evidence, equity, equity practice, commercial law, civil code, and code of practice of Georgia (23 weeks), also lectures on medical jurisprudence delivered twice a week.

Method of instruction.—Lessons are assigned in the text-books and the students recite what they have memorized, the professor illustrating and explaining the text.

28. *Law Department of Emory College*, Oxford, Ga. Two instructors, other items not reported.

Course of study: First Year.—Blackstone's and Brown's Commentaries; Robinson's Elementary Law (12 weeks); Chitty's Pleadings; Greenleaf's Evidence; Adam's Equity; Bishop's Criminal Law; Code of Georgia.

29. *School of Law of the University of Kansas*, Lawrence, Kans. J. W. Green, dean. Six instructors, 79 students, 5 having degrees in letters and science, 29 graduates, 40 weeks in school year.

Course of study: First year.—Kent's and Blackstone's Commentaries; Cooley's Constitutional Law; Schouler's Domestic Relations; Bishop's Contracts; Story's Agency; Story's Bailments; Tiedeman's Commercial Paper; Parson's Partnership; Story's Sales; Davis's International Law; Schuyler's American Diplomacy.

Second year.—Bigelow's Torts; Morawetz's Corporations; Tiedeman's Real Property; Washburn's Real Property; Greenleaf's Evidence; Bliss's and Gould's Pleading; Story's Equity Pleading; Bispham's Equity Jurisprudence; Bishop's Criminal Law.

Organization and methods.—Applicants for admission to the school are examined in English language, in American and general history. Graduates of colleges and other secondary institutions are exempt from this examination, as are also those presenting first and second grade teachers' certificates. The instruction is given by daily recitations upon assigned portions of text-books, the drill of the recitation room being supplemented by lectures.

30. *Law School of the University of Louisville*, Louisville, Ky. W. O. Harris, dean. Three instructors, 40 students, 17 graduates, 28 weeks in school year.

Course of study: First year.—Institutes and elementary law; real property; pleading, contracts, bills of exchange, and promissory notes; criminal law; domestic relations; torts. Books used: Blackstone's Commentaries, Smith's Contracts, Story's Bills of Exchange, Bigelow's Torts, Smith's Mercantile Law.

Second year.—Pleadings and civil procedure, evidence, equity jurisprudence, commercial law, real property, criminal law (continued). Books used: Stephen's Pleadings; Greenleaf's Evidence; Blackstone's Commentaries; Bispham's Equity; Smith's Mercantile Law; Bliss's Pleading.

Method's used:—Students are required to take notes on the lectures and read the

leading cases referred to, and every afternoon in the week they are closely examined on the lectures and cases already gone over. In the moot court students are required to collect the authorities on important questions, and to make oral and written arguments.

31. *Law School of the University of Maryland*, Baltimore, Md. George William Dobbin, dean. Seven instructors, 100 students, 16 having degrees of letters or science, 22 graduates, 34 weeks in school year.

Course of study: First year.—Elementary common law; personal property and domestic relations (16 weeks); real property, contracts, 16 weeks.

Second year.—Criminal law, executors and administrators, pleading, torts, (16 weeks); real property (titles); commercial law, bills and notes, corporation, pleadings (16 weeks).

Third year.—Practice, evidence, international law, and admiralty (16 weeks); equity jurisprudence and procedure, constitutional and statute law (16 weeks).

Remarks.—The course extends over three years. The faculty being satisfied that students who have not made considerable progress in the study of law do themselves and their school an injury by attempting to graduate after a shorter period. The methods of instruction is by lectures, reading, and catechising.

32. *Baltimore University School of Law*, Baltimore, Md. Just organized; 25 weeks in school year.

Course of study: First year.—Common law, domestic relations, pleading and practice, evidence, real property, equity, testamentary law, torts, crimes, and punishments, corporations, contracts, commercial law (except bills and notes). Eight lectures a week in the course.

Second year.—Domestic relations (continued), extraordinary remedies, bills and notes, insurance, medical jurisprudence, statutory crimes, criminal procedure, and evidence; constitutional law, international law, railroad law, admiralty. The moot court meets once a week during the session.

33. *Law School of the University of Mississippi*, University P. O., Miss. Albert Hall Whitefield, dean. Five instructors, 21 students, 2 having degree in letters or science, 13 graduates; 40 weeks in school year.

Course of study: First year.—Political and legal constitution of England, public and domestic relations of individuals, real estate, personal property, organization and jurisdiction of courts, pleading and practice, law of evidence, maritime law, bills of exchange and promissory notes, principal and agent, partnership, principal and surety, bailments, insurance, corporations, criminal law, criminal pleading and practice, medical jurisprudence.—Books used: Chase's Blackstone, Stephen's Pleading, Evidence, first volume, Bishop's Criminal Law, Bishop's Criminal Procedure.

Second year.—Contracts, torts, equity including testaments and administration, equity pleading and practice, including probate and minor's business, public international law, American Constitutional law, including taxation; Federal jurisprudence and procedure, railways and common carriers, real estate, code study. Books used: Smith's Contracts, Bigelow's Torts, Adams's Equity, Bispham's Equity Jurisprudence, Barton's Suit in Equity, Davis's International Law, Cooley's Constitutional Limitations, Foster's Federal Practice, Constitution of the United States, and of Mississippi, Pierce's Railroads, Tiedeman's Real Estate, Mississippi Code.

Methods of instruction.—Text-books are the chief means of instruction in this school, and lectures are not informally read to the classes. Moot courts are held from time to time during the term.

34. *Law Department of the University of Michigan*, Ann Arbor, Mich. Gerome C. Knowlton, dean. Twenty-eight instructors; 648 students, 63 having degree in letters or science; 290 graduates, 36 weeks in school year.

Course of study: First year.—Lectures: Pleading and practice, personal property and title thereto, fixtures and easements, equity pleading and practice, bailments and carriers' contracts, domestic relations, torts, agency. Partnerships.—Text-book

instruction: Cooley's Blackstone, Book 2, Anson's Contracts, Stephen's Pleading, Lube's Equity Pleading; Benjamin's Chalmer's Bills and Notes. The members of this class are required to make a study of leading cases. Elocutionary exercises are given as an option.

Second year.—Lectures: Jurisprudence of the United States, evidence, real property, criminal law, statutory crimes, wills, probate, corporations. Constitutional law.—Text-book instruction: Heard's Criminal Pleading and (for those coming from code States) Bliss on Code Pleading. Study of forensic orators and oratory and oral discussions are optional.

Third year (post-graduate course).—Public international law; history of treaties; history of real property law (based on Digby); law of railroads; science of jurisprudence (Holland's work); railroad problem; corporative constitutional law; advanced course in constitutional law and history; writs of mandamus quo warranto, etc.; High's Extraordinary Legal Remedies; the interstate commerce act; admiralty law; insurance; medical jurisprudence; code pleading and practice; injunction and receivers; toxicology in its legal relations; mining law; legal microscopy; patent law; history of the common law.

Admission and methods of instruction.—An examination as to general education is required of applicants for admission. The examination embraces arithmetic, geography, composition, English and American history, portions of books 1 and 2 of Blackstone and all of book 4. Instruction is given by lectures and recitations. The members of both the regular classes are examined daily throughout the year on the lectures delivered. In addition to this work the classes are divided into sections and are required to recite daily upon the lectures after the manner adopted in the text-book instruction. Moot courts are held from time to time during the year.

35. *College of Law of the University of Wisconsin*, Madison, Wis. Edwin E. Bryant, dean.—Twelve instructors, 126 students, 2 having degree in letters or science, 53 graduates, 37 weeks in school year.

Course of study: First year: Elementary law, contracts, agency, domestic relations, real property, personal property, common law, pleading and practice (14½ weeks), real property, contracts, partnership, equity pleading and practice, criminal law, private corporations (12 weeks), contracts, bailments, real property, criminal law and practice, public corporations, practice and pleading under code (10½ weeks), Bishop's Contracts, and Noncontract Law, Bishop's Criminal Law, Benjamin's Sales, Dillon on Municipal Corporations, Moravetz's Private Corporations, Parson's Contracts, Stephen's Pleading, Story's Agency and Partnership, Tiedeman's Real Property and Sales, etc.

Second year.—Contracts, bills of exchange and promissory notes, evidence, wills, real property, uses and trusts, common carriers, taxation, practice and pleading under code (14½ weeks), constitutional law, real property, eminent domain, bills of exchange and promissory notes, evidence, equity jurisprudence, practice after judgment, special proceedings, special actions, railway law, damages, estoppel (12 weeks), constitutional law, equity jurisprudence, torts and remedies therefor, evidence, railroad law, administration of estates, negligence, practice in special actions and proceedings, Cooley's Torts, Edward's Bills of Exchange and Promissory Notes, Greenleaf's Evidence, Langdell's Equity Pleading, Lewis's Eminent Domain, Mechem's Agency, Mills's Eminent Domain, Pomeroy's Equity Jurisprudence, Pomeroy's Remedies and Remedial Rights, Redfield's Wills.

Admission and methods of instruction.—Candidates for admission not graduates of higher or secondary schools are required to pass an examination in the English language and literature, in American and general history, and in the Constitution of the United States. The instruction is imparted by means of lectures in which student is referred to leading cases, and study of text-books with recitations. Moot courts are held.

36. *College of Law, University of Minnesota*, Minneapolis, Minn. William C. Paul-

tee, dean.—Sixteen instructors; 242 students, 20 having degree in letters or science; 56 graduates; 36 weeks in school year.

Course of study: First year.—Contracts, torts, criminal law and procedure, real property, equity jurisdiction and procedure, domestic relations, suretyship and mortgage, partnership, common law and code pleading, evidence.

Second year.—Contracts, corporations, fire and life insurance, wills and administration, taxation, international law, conflict of laws, admiralty laws, medical jurisprudence, and practice of United States courts.

Third year.—For the benefit of those who desire further instruction a third-year course has been established. It is concerned with equity, civil and criminal procedure, and such other branches as may be desired. Special attention, however, is given to Minnesota law and practice, general jurisprudence, international and constitutional law, constitutional history of the United States.

Methods of instruction.—The method of instruction is not confined either to lectures or to recitations, but a combination of both is adopted. Reports are used to familiarize the student with the leading cases upon the various subjects in which he receives instruction. A moot court is organized at the beginning of each year and continued during the three terms. There is also a system of moot courts corresponding to the justice, the district, and the supreme courts of Minnesota.

37. *Department of Law of the University of the City of New York*, New York City. Austin Abbott, dean. Ten instructors, 342 students, 35 having degree in letters or science, 91 graduates, 32 weeks in school year.

Course of study: First year.—Elementary law, Roman law, persons, property, elements of torts, corporations, criminal law, 3:45 to 4:30 p. m.; contracts and relations of contracting parties, corporations, 4:30 to 5:15 p. m.; negotiable paper, sales, torts, and civil remedies, 5:15 to 6 p. m.

Second year.—Principles of pleading, equity jurisprudence, evidence, short illustrative exposition of applied law, 3:45 to 5:15 p. m.; real property, 5:15 to 6 p. m.; wills and administration.

Methods of instruction.—The instruction is by lectures by the regular professors and special lectures and by the study of text-books, cases, and statutes (select titles), recitations, moot courts, etc.

38. *Law School of the University of North Carolina*, Chapel Hill, N. C. John Manning, professor. Three instructors, 55 students, 20 having degree in letters or science, 7 graduates, 40 weeks in school year.

Course of study: First year.—Blackstone's Commentaries, Washburn's Real Property, Schouler's Executors, Stephen's Pleading, Chitty's Pleading, Adams's or Bishop's Equity, Vol. I of Greenleaf's Evidence, Smith's Contracts, Addison or Bigelow's Torts, Constitution of the United States and of North Carolina, Code of North Carolina, particularly the Code of Civil Procedure. For the degree course: Pollock's Contracts, Pierce's American Railroad Law, Angell and Ames's or Dillon's Corporation, Pomeroy's Equity Jurisprudence, Cooley's Constitutional Limitations, Wharton's Criminal Law, Best's Principles of Evidence, Cooley's Taxation, May's Insurance.

Second year.—(The course for a degree may be completed in one year, but ordinarily requires two years.)

Remarks.—The plan of study comprises, first, the course prescribed for applicants for license by the Supreme Court of the State; second, a course of study for those desiring to compete for the degree of Bachelor of Laws. To complete the entire course will ordinarily require two years.

39. *School of Law of the University of Oregon*, Portland, Oregon. Richard H. Thornton, dean. Four instructors, 55 students, 5 having degree in letters or science, 19 graduates, 30 weeks in school year.

Course of study: First year.—Blackstone's Commentaries, Kent's Commentaries, Parson's Contracts.

Second year.—Gould's Pleading, Stephen's Evidence, Pomeroy's Equity, Cooley's Constitutional Limitations, General Laws of Oregon.

40. *Law Department of the University of Pennsylvania*, Philadelphia, Pa. C. Stuart Patterson, dean. Seven instructors, 176 students, 2 having degree in letters or science, 50 graduates, 29 weeks in school year.

Course of study: First year.—Real property, elementary equity, contracts, torts, pleading.—Books used: Bispham's Equity, Williams's Real Property, Mitchell's Lectures upon Real Estate and Conveyancing in Pennsylvania, Pollock's Contracts, Anson's Contracts, Hare's Contracts, Pollock's Torts, Bigelow's Torts, Ames's Cases, Stephen's Pleading.

Second year.—Real property and conveyancing, partnerships, equity, contracts, evidence. Books used: Stephen's Evidence, Parson's Partnership, in addition to those mentioned under first year.

Third year.—Constitutional law, wills and administration, commercial law, practice and pleading in equity, contracts, criminal law, practice. Books used: Russell's Crime, Stephen's History of the Criminal Law, Story's Constitution, Hare's Constitution, Patterson's Federal Restraints on State Action.

Admission and methods of instruction.—Examination in high-school studies imposed upon those applicants for admission who are not Bachelors of Arts or of Sciences. The instruction is given by lectures and by frequent examinations, and the students are required to read leading cases illustrating the subjects of instruction. Moot courts are held once a week, at which questions prepared by the professor are argued.

41. *Department of Law of the University of Texas*, Austin, Tex.—Two instructors, 76 students,—having degree in letters or science, 26 graduates, 32 weeks in school year.

Course of study: First year.—Personal rights, domestic relations, estates in and titles to property, both real and personal; torts, criminal law, contract, sales, agency, pleading, practice and evidence. Books used: Blackstone's Commentaries, Anson's Contract, Tiedeman's Sales, Sayle's and Bassett's Texas Pleading and Practice, Robert's Elements of Texas Pleading, Bishop's Non-Contract Law; Greenleaf's Evidence, Vol. I.

Second year.—Government of the United States and of Texas, with judicial system of each; international law, constitutional law, equity, suretyship and guaranty, negotiable instruments, partnerships, private corporations, legal ethics. Books used: Revised Statutes of Texas, containing Constitution of United States and of Texas; Kent's Commentaries, vol. I, Peeler's Law and Equity in the United States Courts, Bispham's Equity, Taylor's Private Corporations.

Remarks: The methods of instruction contemplate the use of text-books, with daily examinations and oral explanations, and also contemplate throughout the entire course occasional lectures, supplementing the text-books and developing the peculiar features of Texas jurisprudence. Moots courts are held.

42. *Law Department of the University of Virginia*, University P. O., Va. John B. Minor, sr., professor.—Three instructors, 134 students, 30 having degree in letters or science, — graduates, 39 weeks in school year.

Course of study: First year.—Minor's Institutes of Common and Statute Law, Vol. I of Rights, which relate to the person; Vol. II of Rights, which relate to real property; Minor's Synopsis of Criminal Law, Blackstone's Commentaries. Lectures Monday, Wednesday, and Friday, from 11 a. m. to 12:30 p. m. Books used: Vattel's International Law, with lectures; Lectures on Government; Federalist; Gilmore's Notes on Vattel and the Constitution. Lectures Thursday and Saturday, 12:30 p. m. to 2 p. m.

Second year.—Minor's Institutes; Vol. IV of the Practice of Law in Civil Cases, including pleading; Vol. III of the Rights which relate to Personal Property, Stephen's Pleading. Lectures Tuesday, Thursday, and Saturday, from 11 a. m. to 12:30 p. m. Books used: Smith's Mercantile Law, Greenleaf's Evidence, Adams's Equity, with lectures and notes. Lectures Monday, Wednesday, and Friday, 12:30 p. m.

Remarks.—The course is intended for two years, but may be completed in one. The department is divided into two schools, known, respectively, as the School of Common and Statute Law and the School of Constitutional and International Law, Mercantile Law, Evidence, and Equity.

43. *Law Department of West Virginia University*, Morgantown, W. Va. Two instructors, 26 students, 3 having degree in letters or science, 19 graduates, 30 weeks in school year.

Course of study: First year.—Rights of persons and things, Blackstone, 'international law, common law, pleading, contracts, negotiable instruments, equity pleading, evidence, 14 weeks; constitutional law, international law, Blackstone, first and second books continued and third and fourth books begun, agency, partnership, surety and guaranty, practice in the courts, equity, evidence, 12 weeks; constitutional law continued, Blackstone, third and fourth books continued, real property, bailments, corporations, practice in the courts, insurance, equity.

Books used: Blackstone's Commentaries, Stephen's Pleading, Brooke's Notes on Common Law Pleading and Practice in West Virginia, Williams's Real Property, Federalist and Cooley's Constitutional Law, Woolsey's Introduction to International Law.

Second year: The course as given in preceding paragraph may be spread over 2 years.

Organization and methods of instruction.—In many cases students take two or three branches of the academic course in connection with the studies of the law department. Such students divide the law course into 2 years. The methods of instruction consist of lectures and examinations from approved text-books read in course, the drawing of various legal papers requisite in the ordinance practice of the law, and moot courts.

44. *Law Department of the Vanderbilt University*, Nashville, Tenn. Thomas H. Malone, dean. Four instructors, 37 students, 5 having degree in letters or science, 18 graduates, 40 weeks in school year.

Course of study: First year.—Bishop's Contracts, Schouler's Domestic Relations, Agency, Tyler's Partnership, Heard's Civil Pleading, Lubé's Equity Pleading, 18 weeks; Taylor's Corporations, bailment, Cooley's Torts, Washburn's Crimes, Reynolds's Evidence, moot court, 17 weeks.

Second year.—Daniel's Negotiable Instruments, Tiedeman's Real Property, Reynolds's Evidence, moot court, 18 weeks; Bispham's Equity Jurisprudence, Cooley's Constitutional Limitations, Lubé's Equity Pleading; admiralty proceedings, moot court. (The students may finish the course as given for two years in one year.)

Remarks.—The daily exercises consist of recitations from the text-books, accompanied with rigid oral questioning and full illustrations and lectures on kindred topics. Moot courts are held.

45. *School of Law of the Washington and Lee University*, Lexington, Va. G. W. C. Lee, dean. Two instructors, 63 students, 2 having degree in letters or science, 24 graduates; 36 weeks in school year.

Course of study: First year.—Junior class: Natural law and international law, 77 hours; Constitutional law, 89 hours; Contracts and carriers, 68 hours; real and personal property, 93 hours; Anson's Contract's, Hutchinson on Carrier's, Tiedeman's Real Property, Blackstone's Commentaries, book 2; printed lectures on real property; Schouler's Personal Property, Vol. 2; Blackstone's Commentaries, book 1, with lectures on natural law; Woolsey's International Law, with lectures; Cooley's Constitutional Law, with lectures; negotiable paper and corporations, 53 hours; equity, domestic relations, and the conflict of laws, 148 hours; torts and crimes, 77 hours; pleading and evidence, 89 hours; Bigelow's Torts; May's Criminal Law; Blackstone's Commentaries, books 3 and 4; Gould's Pleading (Heard's edition); Greenleaf's Evidence, Vol. 1; printed lectures on negotiable paper; printed lectures on corporations; Bispham's Equity; Schouler's Domestic Relations; lectures on

partnership; insurance; shipping and admiralty; printed lectures on the conflict of laws.

Second year.—The course may be pursued so that its completion will require 2 years.

Remarks.—The course is so arranged as to render possible its completion in one session of 9 months. Students are advised, however, to devote 2 years to the study of law. The basis of instruction is the study of the text-book, with frequent oral examinations. Lectures are delivered by the professors to supplement the text. Two moot courts are organized.

46. *College of Law of Willamette University*, Salem, Oregon. William Ramsey, dean. Twelve instructors, 5 students, 1 graduate; 36 weeks in school year.

Course of study: First year.—General commentaries upon municipal law, contracts, real estate, commercial law. Books used: Blackstone's Commentaries, Tiedeman's Real Property, Kent's Commentaries, Parson's Contracts.

Second year.—Equity jurisprudence, torts, criminal law, evidence, pleading, and practice. Books used: Cooley's Torts, Bispham's Equity, Wharton's Criminal Law, Greenleaf's Evidence, Chitty's Pleadings, Vol. 1, Bliss's Code Pleading, Daniel's Negotiable Instruments.

Organization and methods of instruction.—There is an examination for admission. The daily exercises consist of lectures and recitations from standard text-books, the latter being accompanied by oral explanations. Moot courts are held regularly.

47. *Law Department of Yale University*, New Haven, Conn. Francis Wayland, dean. Two instructors (professors of law), 155 students, 43 graduates; 33 weeks in school year.

Course of study: First year.—English constitutional law, bailments, evidence, international law, elementary law, pleading, evidence, mercantile law, native history, American law, wills (or Roman law), contracts, torts, forensic elocution.

Second year.—Evidence, real property, domestic relations, forensic oratory, criminal law, mercantile law, American constitutional law, public and private corporations, wills (or Roman law), practice, contracts, torts, international law, patents, attachments, judgments and executions, corporate trusts, transfer of monetary securities, insurance, the beginning of practice.

Third year.—[First year of graduate course.] Patents, taxation, railroad law, practice in U. S. courts, admiralty law, sales, municipal corporations, statute law, Federal jurisprudence, international law, mortgages, political science and history, English constitutional history, railway management.

[Second year of graduate course]. Early history of real property, canon law, comparative jurisprudence, code Napoleon, English constitutional law, political and social science, Roman law, economics of transportation, public finance.

Organization and methods of instruction.—The courses of the school are: An undergraduate, a graduate, and two special courses, each of two years, except the first special course, which is of one year. The first and second years of the graduate course have no direct connection. Indeed, the first year of the graduate course is considered as a fitting conclusion to the studies of the undergraduate course. Neither of the special courses is professional. The method of instruction is mainly that of recitation. Hence, although certain subjects are taught by lectures, care is taken that the same topic is covered by recitation work in connection with the wider branches of the law to which they belong. Public moot courts, besides those in the class quiz-clubs, are regularly held, one of the professors presiding. The requirements for admission are that the applicant must be 18 years of age or over, and must have passed an examination in American and English history on the text of the Constitution.

48. *College of Law of Illinois Wesleyan University*, Bloomington, Ill., Owen T. Reeves, dean. Eight instructors, 44 students, 17 graduates, 36 weeks in school year.

Course of study: First year.—Elementary law (Robinson), 26 hours; American law (Walker), 65 hours; torts (Bigelow), 26 hours; civil procedure, 13 hours;

English common law (Blackstone, books 1 and 2), 24 hours; contracts (Benjamin and Parsons), 105 hours; pleading (Stephen and Gould), 42 hours; English common law (Blackstone, books 3 and 4), 18 hours; civil procedure (Moore's Civil Practice), 34 hours.

Second year.—Common law (Kent, Parts I to V), 26 hours; real property (Tiedeman), 50 hours; evidence (Greenleaf and Chase), 34 hours; pleading (Chitty), 50 hours; practice (Illinois Practice Act), 25 hours; common law (Kent, Part V), 24 hours; equity jurisprudence (Bispham), 24 hours; common law (Kent, Part VI), 18 hours; criminal law (Harris), 18 hours; torts (Cooley), 18 hours; equity pleading (Heard), 9 hours; practice (Illinois Chancery Code), 9 hours.

Methods of instruction.—The method adopted is mainly that of daily recitations from text-books, during which the text is illustrated by examples easily comprehended by the student. Moot courts are held throughout the course.

49. *Department of Law of the University of Tennessee*, Knoxville, Tenn. Henry H. Ingersoll, dean. Eight instructors, 10 students, 3 having degree in letters or science, 6 graduates, 40 weeks in school year.

Course of study: First year.—Robinson's Elementary Law, May's Criminal Law, Bigelow's Torts, Bishop's Contracts, Schouler's Domestic Relations, Tiedeman's Real Property, Smith's Commercial Law, History of a Law Suit.

Second Year.—Cooley's Constitutional Law, Boone's Corporations, Stephen's Pleading, Greenleaf's Evidence, Vol. 1; Ram's Legal Judgment, Bispham's Equity, Gibson's Suits in Chancery. (The course may be completed in one year by earnest application and sole attention to the law.)

Methods of instruction.—The methods employed are text-book study, with daily recitation and colloquial instruction, weekly moot courts and lectures.

50. *Department of Law of the University of South Carolina*, Columbia, S. C. Thomas A. Saxon, dean. One instructor, 20 students, 4 graduates, 32 weeks in school year.

Course of study: First year.—Organization and jurisdiction of courts of the United States and South Carolina, sources of municipal law, domestic relations, personal property, and title to same, administration, wills, contracts, bailments, bills and notes, principal and agent, corporations, criminal law and herein of torts and nuisance, public and private, evidence. Class meets five times a week during session. Constitution of United States and the Judiciary Acts, Vol. 1; Kent's Commentaries, Constitution of South Carolina, organization of judiciary, acts, etc., bearing on organization of judiciary, Kent's Short Chapters on Domestic Relations, Reeve's Domestic Relations, Kent's Personal Property and Statutes of South Carolina, Blackstone's Commentaries (book 4), May's Criminal Law and South Carolina Criminal Law.

Second year.—Pleading and practice, real property, equity jurisprudence, conveyancing, trial of title to lands, maritime law and law of nations, statute law of the State on subjects not read in connection with the text and lectures of the course—deeds, recording, habeas corpus, etc. Class meets five times a week during session.

Boone's Code Pleading, the South Carolina Code, Kent's Commentaries, Vol. 4; Blackstone's Commentaries (selections); Washburn's Real Property, Vol. 2, Adams's Equity, Story's Equity, White and Tudor's Leading Cases in Equity. Martindall's Conveyancing, Sedgwick and Wait's Ejectment.

Methods of instruction.—Instruction is given by lectures and text-books. Moot courts are held once a week.

51. *The Dickinson School of Law*, Carlisle, Pa. William Trickett, dean. Twelve instructors, 31 students, 7 having degree in letters or science, 13 graduates, 34 weeks in school year.

Course of study not given.

52. *School of Law of Ohio State University*, Columbus, Ohio. Marshall J. Williams, dean. Nineteen instructors, 63 students, 17 graduates, 36 weeks in school year.

Course of study: First year.—Elementary law, criminal law, domestic relations, torts, evidence, contracts, common-law pleading.

Second year.—Agency, partnership, sales, bailments, bills and notes, and commercial law, municipal corporations, private corporations, mortgages and liens, equity jurisprudence, real property, constitutional law (elective), equity and code pleading and practice, insurance, medical jurisprudence (elective), legal microscopy (elective).

Organization and methods of instruction.—Those not able to give satisfactory evidence of scholastic attainments must undergo an examination equivalent to that required of applicants for admission to one of the four-year courses of the university. The system of instruction is by lectures, text-books, and recitations. Moot courts are held. "For those who complete the course in law, but have not had the required amount of general education *necessary* for the degree of LL. B., a certificate of having completed the course in law is provided."—(H. L. Wilgers, esq., in reply to inquiry from Bureau of Education.)

53. *Law Department of the Missouri State University*, Columbia, Mo. Alexander Martin, dean. Seven instructors, 75 students, 15 having degree in letters or science, 25 graduates, 36 weeks in school year.

Course of study: First year.—Elementary law, criminal law, torts, bailments, contracts, law of sales, commercial paper, partnership, domestic relations. Books used: Robinson's Elementary Law, Bishop's Contracts, Cooley's Torts, Schouler's Domestic Relations and Bailments, Tiedeman's Sales, Pollock's Partnership, Tiedeman's Commercial Paper, Criminal Code of Missouri.

Second year.—Law of real property, constitutional law, interpretation and construction of statutes, pleading and practice, equity jurisprudence, admiralty, insurance, law of corporations, international law, law of evidence. Books used: Tiedeman's Real Property, Bispham's Equity Jurisprudence, Greenleaf's Evidence, Vol. 1; Boon's Corporations, Cooley's Principles of Constitutional Law, Woolsey's International Law, May's or Flanders's Insurance, Bliss's Code Pleading, Deshy's Shipping and Admiralty and Federal Procedure.

Third year (graduate course).—Constitutional law, corporations, insurance, trusts, patents, law of homicide. The student in this course is allowed to select any special subject in law for extended examination and study, to be presented concurrently with the subjects embraced in the course.

Organization and methods of instruction.—The course is of two years, but to provide the intending practitioner with a more extended and practical knowledge of the most important subjects embraced in modern law a post-graduate course was established in April, 1891. The faculty are more and more satisfied that the highest results can not be reached by lectures alone, however clear and thorough they may be, and that the study of text-books and leading cases is also necessary. A moot court is held every Friday.

54. *Iowa College of Law*, Des Moines, Iowa, Josiah Given, dean.—Six instructors, 37 students, 12 graduates, 32 weeks in school year.

Course of study: First year.—Elementary law (Walker's American Law), contracts (Bishop's), torts (Bishop's Noncontract Law), pleading and practice (Stephen's Work and Boone's Code Pleading), review and general discussion (once in two weeks), 10 weeks; criminal law (Wharton's), partnership (Story), agency (Mecchem's), bills and notes (Tiedeman's), pleading and practice, review and general discussion (once every two weeks), 11 weeks; bailments and common carriers, (Schouler's), domestic relations, Browne's Real Property (Tiedeman), pleading and practice (Kinne's), review and general discussion (once every two weeks), 10 weeks.

Second year.—Elementary law (Blackstone's Commentaries), personal property (Brantley's), evidence (Greenleaf's, vol. 1), sales and chattel mortgages (Tiedeman's), pleading and practice (Kinne's), review and general discussion (once every two weeks), 10 weeks; elementary law (Blackstone's Commentaries), equity jurisprudence (Bispham's), corporations (Boone's), insurance (May's), pleading and practice (Kinne's), review and discussion (once every two weeks), 11 weeks; elementary law (Blackstone's Commentaries), corporations, constitutional and international law, civil law, probate, pleading, and practice, review and general discussion.

Organization and methods of instruction.—Lectures and text-book recitations upon lessons previously announced are combined. Topics are assigned to students, who are required to present them orally and often without notes to the class. Moot courts are organized immediately after the opening of the fall term. An admission examination is held for those not having been educated in a college or secondary school. The subjects of examination are arithmetic, history, orthography, English grammar, and composition.

55. *Law School of Mercer University*, Macon, Ga.—Three instructors.

Beyond the course of the school (which is not given), lectures are given during the year on special topics, such as pleading and evidence, commercial law, law of ejectment, equity, professional ethics, etc.

56. *Law School of the University of Colorado*, Boulder, Colo. Moses Hallett, dean.—Fourteen instructors; 36 weeks in school year.

The school having been organized in May, 1892, it is not desirable to present statistics until it fairly enters upon its work in September, 1892.

Course of study: First year.—American constitutional law, Roman law, contracts, real property, criminal law and procedure, torts and personal rights, bailments, common law and code, pleadings, domestic relations, personal property, private corporations, agency, wills.

Second year.—Federal jurisprudence, sales of personal property, evidence, equity jurisprudence, pleading and practice, trusts, executors and administrators, suretyship and mortgages, bills of exchange and promissory notes, partnership, damages, carriers, peculiarities of Colorado law and practice; special lectures will be delivered.

Organization and methods of instruction.—Although the method of instruction is mainly that of lectures, the same subject-matter will be covered by recitation work. Moot courts will be held each week. "Those who are not graduates of colleges or high schools are required to undergo a written examination in respect to general education."

Summary of statistics of law schools in the United States.

Number of law schools.....	56
Number of instructors.....	453
Number of students.....	6, 106

The number of students who had, previous to their engaging in the study of law, obtained a degree in letters or science, either from a college or some other institution conferring literary or scientific degree, is unknown. Many colleges take no record of such facts; others again may be apprehensive that invidious distinctions may be drawn against themselves, if the facts in their case be known. Under these conditions there is but one method to follow, that is, to take the total number of students in the schools that report the fact in question and to compare that total with the total number of students reported as having previously obtained a bachelor degree in arts or science. This has been the method followed by the specialist who has prepared the chapter on professional schools in the Annual Report of the Bureau of Education, when preparing the diagrams illustrating the increase of attendance at the various professional institutions in Germany, France, and particularly in the United States. Adopting this method of procedure then, it appears that the—

Number of schools reporting the fact was	26
Number of students in them	3, 261
Number of students having a degree	498

To put the matter briefly, 15 in every 100 students in 26 schools had obtained a degree in some institution not giving professional instruction, or, more technically expressed, had obtained a degree in letters or science.

The length of the course is two years. Of 54 schools reporting 40 have a two years' course, 7 have a course of 1 year which in several instances may be spread

over two, 27 schools have a three years' course. Of the 40 schools with two years' courses, several permit the student to take it in one year, and 7 schools, on the contrary, offer a post-graduate course. In Washington, D. C., this is called a "post-graduate course in practice." Yale Law School has an undergraduate course of two years and a post-graduate course also of two, but one (the last) of which need not be taken.

III. COLLEGES OFFERING INSTRUCTION IN LAW IN COLLEGE AND COMMERCIAL COURSES.¹

1. Arkansas College, Batesville, Ark. General principles of common and international law.
2. University of California, Berkeley, Cal. Sophomore: International law. Senior: Roman law; jurisprudence; constitutional law of the United States.
3. University of the Pacific, College Park, Cal. Junior: Constitutional and international law; commercial law.
4. Los Angeles College, Los Angeles, Cal. Sophomore: Constitutional law. Junior: International law. Senior: Roman jurisprudence.
5. St. Vincent's College, Los Angeles, Cal. Commercial law.
6. Leland Stanford, Jr., University, Menlo Park, Cal. History of Roman law.
7. Napa College, Napa, Cal. Junior: Jurisprudence; commercial law.
8. California College, Oakland, Cal. Senior: International law.
9. University of Southern California, University, Cal. Sophomore: Constitutional law. Junior: International law.
10. San Joaquin Valley College, Woodbridge, Cal. Senior: International law.
11. Colorado College, Colorado Springs, Colo. Junior and Senior: Roman law.
12. University of Denver, University Park, Colo. Junior: International law.
13. Wesleyan University, Middletown, Conn. Junior: Roman jurisprudence.
14. Yale University, New Haven, Conn. Senior: Law.
15. Delaware College, Newark, Del. Senior: International or constitutional law.
16. Columbian University, Washington, D. C. Senior: International law.
17. Howard University, Washington, D. C. Senior: International law.
18. John B. Stetson University, De Land, Fla. Commercial law.
19. Florida Conference College, Leesburg, Fla. Commercial law.
20. Seminary West of the Suwanee River, Tallahassee, Fla. Senior: International law; commercial law.
21. Hedding College, Abingdon, Ill. Junior: Commercial law. Senior: International law.
22. Illinois Wesleyan University, Bloomington, Ill. Senior: International law.
23. St. Viator's College, Bourbonnais Grove, Ill. Third and fourth years: Commercial law.
24. Blackburn University, Carlinville, Ill. Senior: International law.
25. Carthage College, Carthage, Ill. Senior: Commercial law.
26. Eureka College, Eureka, Ill. Commercial law.
27. Northwestern University, Evanston, Ill. Senior: Constitutional and international law.
28. Ewing College, Ewing, Ill. Senior: International law.
29. Knox College, Galesburg, Ill. Senior: International law.
30. Lombard University, Galesburg, Ill. Senior: Law of nations.
31. Lake Forest University, Lake Forest, Ill. Senior: Roman law.
32. McKendree College, Lebanon, Ill. Senior: International law.
33. Lincoln University, Lincoln, Ill. Senior: International law.
34. Northwestern College, Naperville, Ill. Junior: Constitutional law. Senior: International law.

¹Prepared by Mr. L. A. Kalbach.

35. Chaddock College, Quincy, Ill. Senior: International law.
36. St. Francis Solanus College, Quincy, Ill. Commercial law.
37. Shurtleff College, Upper Alton, Ill. Junior: Constitutional law. Senior: International law.
38. University of Illinois, Urbana, Ill. Senior: Rural law.
39. Wabash College, Crawfordsville, Ind. Senior: Roman law.
40. Taylor University, Fort Wayne, Ind. Commercial law.
41. Franklin College, Franklin, Ind: Senior: Constitutional law.
42. De Pauw University, Greencastle, Ind. Senior: International law.
43. Hanover College, Hanover, Ind. Junior: Constitutional and international law.
44. Hartsville College, Hartsville, Ind. Commercial law.
45. Butler University, Irvington, Ind. Senior: International law.
46. Union Christian College, Merom, Ind. Commercial law.
47. Ridgeville College, Ridgeville, Ind. Commercial law.
48. Amity College, College Springs, Iowa. Senior International law, commercial law.
49. German-English College, Charles City, Iowa. Commercial law.
50. Des Moines College, Des Moines, Iowa. Senior: International law.
51. Drake University, Des Moines, Iowa. Senior: Commercial law.
52. Parsons College, Fairfield, Iowa. Senior: International law.
53. Upper Iowa University, Fayette, Iowa. Senior: International law.
54. Iowa College, Grinnell, Iowa. Senior: International law, law and public economy.
55. Simpson College, Indianola, Iowa. Senior: Constitutional law.
56. State University of Iowa, Iowa City, Iowa. Junior: Constitutional and international law.
57. Iowa Wesleyan University, Mount Pleasant, Iowa. Senior: International law.
58. Cornell College, Mount Vernon, Iowa. Senior: International law.
59. Oskaloosa College, Oskaloosa, Iowa. Senior: International law, commercial law.
60. Penn College, Oskaloosa, Iowa. Senior: International law.
61. Central University of Iowa, Pella, Iowa. Senior: International law.
62. University of the Northwest, Sioux City, Iowa. Senior: International law, commercial law.
63. Tabor College, Tabor, Iowa. Senior: International law, commercial law.
64. Western College, Toledo, Iowa. Senior: International law, commercial law.
65. Midland College, Atchison, Kans. Senior: International law.
66. St. Benedict's College, Atchison, Kans. Commercial law.
67. College of Emporia, Emporia, Kans. Senior: Constitutional law.
68. Central College, Enterprise, Kans. Senior: Roman and international law.
69. Highland University, Highland, Kans. Commercial law.
70. Campbell University, Holton, Kans. Commercial law.
71. University of Kansas, Lawrence, Kans. Constitutional and international law.
72. Lane University, Leocompton, Kans. Commercial law.
73. Bethany College, Lindsborg, Kans. Commercial law.
74. Ottawa University, Ottawa, Kans. Senior: International law.
75. St. Mary's College, St. Mary's, Kans. Commercial law.
76. Kansas Wesleyan University, Salina, Kans. Junior: Constitutional law. Senior: International law, commercial law.
77. Cooper Memorial College, Sterling, Kans. Senior: International law.
78. Wichita University, Wichita, Kans. Commercial law.
79. Southwest Kansas College, Winfield, Kans. Senior: Constitutional law, commercial law.
80. Centre College, Danville, Ky. Junior: International law.
81. Eminence College, Eminence, Ky. Commercial law.

82. Georgetown College, Georgetown, Ky. First year: Commercial law.
83. Central University, Richmond, Ky. Commercial law.
84. Kentucky Wesleyan College, Winchester, Ky. Senior: International law, Commercial law.
85. Jefferson College, Convent, La. Commercial law.
86. Centenary College, Jackson, La. Senior: International and constitutional law.
87. Tulane University, New Orleans, La. Senior: International law.
88. Bowdoin College, Brunswick, Mo. Senior: Constitutional law.
89. St. John's College, Annapolis, Md. Senior: International and constitutional law.
90. Johns Hopkins University, Baltimore, Md. International law, constitutional law, Roman law, comparative jurisprudence of the principal European systems, history of the common and statute law of England, administration and public law.
91. Rock Hill College, Ellicott City, Md. Commercial law.
92. Mt. St. Mary's College, Mt. St. Marys, Md. Commercial law.
93. Amherst College, Amherst, Mass. Senior: International law.
94. Boston University, Boston, Mass. Junior and Senior: Roman law.
95. Harvard University, Cambridge, Mass. International, constitutional, and Roman law.
96. French Protestant College, Springfield, Mass. Senior: International law.
97. Tufts College, Tufts College, Mass. Senior: Ancient, Roman, and international law.
98. Williams College, Williamstown, Mass. Senior: Constitutional, civil, and international law.
99. Adrian College, Adrian, Mich. Senior: International law, commercial law.
100. Albion College, Albion, Mich. Senior: Constitutional and international law.
101. Alma College, Alma, Mich. Senior: International law, commercial law.
102. University of Michigan, Ann Arbor, Mich: Constitutional law of the United States, comparative constitutional law, international law.
103. Benzonia College, Benzonia, Mich. Commercial law.
104. Detroit College, Detroit, Mich. Commercial law.
105. Hillsdale College, Hillsdale, Mich. Senior: International law.
106. St. John's University, Collegeville, Minn. Commercial law.
107. Hamline University, Hamline, Minn. Senior: Constitutional, international, and American common law.
108. University of Minnesota, Minneapolis, Minn. Senior: Public international law.
109. Carleton College, Northfield, Minn. Senior: Constitutional law.
110. Macalester College, St. Paul, Minn. Senior: International law.
111. St. Paul's College, St. Paul Park, Minn. Senior: International law, commercial law.
112. Parker College, Winnebago City, Minn. Senior: International law.
113. Mississippi College, Clinton, Miss. Commercial law.
114. Christian University, Canton, Mo. Commercial law.
115. St. Vincent's College, Cape Girardeau, Mo. Commercial law.
116. Carthage Collegiate Institute, Carthage, Mo. Senior: Constitutional and international law.
117. University of the State of Missouri, Columbia, Mo. Constitutional and international law, law of contracts.
118. Central College, Fayette, Mo. Commercial law.
119. Ozark College, Greenfield, Mo. Commercial law.
120. William Jewell College, Liberty, Mo. Commercial law; Senior: International law.
121. Missouri Valley College, Marshall, Mo. Senior: International law.
122. Morrisville College, Morrisville, Mo. Commercial law.

123. Washington University, St. Louis, Mo. Senior: International law. Fifth year: Business law and riparian rights, mining law, insurance law.
124. St. Louis University, St. Louis, Mo. Commercial law.
125. Drury College, Springfield, Mo. Junior: International law.
126. Tarkio College, Tarkio, Mo. Senior: International law; commercial law.
127. Avalon College, Trenton, Mo. Junior: International law; commercial law.
128. Central Wesleyan College, Warrenton, Mo. Senior: International law, commercial law.
129. College of Montana, Deer Lodge, Mont. Senior: International law.
130. Doane College, Crete, Nebr. Senior: International law.
131. Cotner University, Lincoln, Nebr. Senior: International law.
132. University of Nebraska, Lincoln, Nebr. Senior: Constitutional and international law.
133. Gates College, Neligh, Nebr. Senior: International law.
134. Nebraska Wesleyan University, University Place, Nebr. Senior: International law.
135. York College, York, Nebr. Senior: International law.
136. University of Nevada, Reno, Nev. Senior: International law, mining law.
137. Dartmouth College, Hanover, N. H. Senior: Constitutional, international, and municipal law.
138. St. Benedict's College, Newark, N. J. Commercial law.
139. Rutgers College, New Brunswick, N. J. Junior: Roman law.
140. College of New Jersey, Princeton, N. J. Senior: General jurisprudence, international law, public law, American constitutional law, Roman law.
141. College of the Sacred Heart, Vineland, N. J. Commercial law.
142. Alfred University, Alfred Centre, N. Y. Commercial law, international law, Roman law, common law.
143. Polytechnic Institute, Brooklyn, N. Y. Senior: Municipal law, constitutional and international law.
144. St. Francis College, Brooklyn, N. Y. Commercial law.
145. Canisius College, Buffalo, N. Y. Commercial law.
146. St. Lawrence University, Canton, N. Y. Senior: Jurisprudence.
147. Hamilton College, Clinton, N. Y. Senior: Constitutional and municipal law.
148. St. John's College, Fordham, N. Y. International and commercial law.
149. Madison University, Hamilton, N. Y. Senior and Junior: Roman and international law.
150. Cornell University, Ithaca, N. Y. Canadian constitutional law, international law, Roman law.
151. College of St. Francis Xavier, New York, N. Y. Natural and international law.
152. College of the City of New York, N. Y. Fourth year: Constitutional and international law.
153. Columbia College, New York, N. Y. Senior: Contracts, elements of jurisprudence, real estate, torts, criminal law and procedure, domestic relations, common-law pleading and procedure.
154. Manhattan College, New York, N. Y. Commercial law.
155. University of the City of New York, N. Y. Senior: Natural and constitutional law, international law.
156. University of Rochester, N. Y. Senior: Roman and international law.
157. Niagara University, Niagara University, N. Y. Commercial law.
158. Syracuse University, Syracuse, N. Y. Senior: Constitutional and international law, jurisprudence.
159. University of North Carolina, Chapel Hill, N. C. Fourth year: Constitutional and international law.
160. Davidson College, N. C. Senior: Commercial law.
161. Guilford College, N. C. Commercial law.

162. North Carolina College, Mt. Pleasant, N. C. Junior: Constitutional law, commercial law.
163. Trinity College, N. C. Senior: International and civil law.
164. Buchtel College, Akron, Ohio. Senior: Constitutional, international, and municipal law.
165. Mount Union College, Alliance, Ohio. Senior: International law.
166. Ashland University, Ashland, Ohio. Junior: Elements of law (Lee).
167. Ohio University, Athens, Ohio. Senior: Constitutional law.
168. Baldwin University, Berea, Ohio. Senior: International law, commercial law.
169. St. Xavier College, Cincinnati, Ohio. Commercial law.
170. Calvin College, Cleveland, Ohio. Commercial law.
171. Belmont College, College Hill, Ohio. Commercial law.
172. Ohio State University, Columbus, Ohio. Sophomore: Constitutional law. Junior and senior: International law, municipal government. Freshman: Commercial law.
173. Ohio Wesleyan University, Delaware, Ohio. Senior: Constitutional and international law.
174. Findlay College, Findlay, Ohio. Senior: Constitutional law, commercial law.
175. Denison University, Granville, Ohio. Senior: International law.
176. Hillsboro College, Hillsboro, Ohio. Commercial law.
177. Hiram College, Hiram, Ohio. Sophomore: Elements of law, international law.
178. Marietta College, Marietta, Ohio. Senior: International law.
179. Franklin College, New Athens, Ohio. Junior: International law. Senior: Commercial law.
180. Muskingum College, New Concord, Ohio. Commercial law.
181. Oberlin College, Oberlin, Ohio. Senior: International law.
182. Miami University, Oxford, Ohio. Junior: International law.
183. Richmond College, Richmond, Ohio. Senior: Roman law; commercial law.
184. Rio Grande College, Rio Grande, Ohio. Senior: International law.
185. Scio College, Scio, Ohio. Junior: Commercial law.
186. Wittenberg College, Springfield, Ohio. Senior: International law.
187. Heidelberg University, Tiffin, Ohio. Commercial law.
188. Otterbein University, Westerville, Ohio. Commercial law.
189. Antioch College, Yellow Springs, Ohio. Junior: Constitutional law.
190. University of Oregon, Eugene, Oregon. Senior: International law; commercial law.
191. McMinnville College, McMinnville, Oregon. Senior: International law.
192. Philomath College, Philomath, Oregon. Commercial law.
193. Willamette University, Salem, Oregon. Freshman: Commercial law. Senior: International law.
194. Western University of Pennsylvania, Allegheny, Pa. Senior: International law.
195. St. Vincent College, Beatty, Pa. Commercial law.
196. Geneva College, Beaver Falls, Pa. Junior: Constitutional law. Senior: International law.
197. Lafayette College, Easton, Pa. Senior: Blackstone.
198. Pennsylvania College, Gettysburg, Pa. Senior: International law.
199. Grove City College, Grove City, Pa. Commercial law.
200. Haverford College, Pa. Junior: Constitutional law. Senior: International law.
201. St. Francis College, Loretto, Pa. Commercial law.
202. Allegheny College, Meadville, Pa. Senior: Constitutional, municipal, and international law.
203. Central Pennsylvania College, New Berlin, Pa. Senior: Commercial law.
204. Westminster College, New Wilmington, Pa. Junior: Constitutional law.
205. University of Pennsylvania, Philadelphia, Pa. Junior: International law. Senior: Mercantile law, constitutional and Roman law.

206. Swarthmore College, Swarthmore, Pa. Senior: International law.
207. Washington and Jefferson College, Washington, Pa. Junior: Constitutional law.
208. Brown University, Providence, R. I. Senior or junior: Constitutional and international law.
209. Newberry College, Newberry, S. C. Sophomore: Constitutional law. Senior: International law.
210. Dakota University, Mitchell, S. Dak. Commercial law.
211. Redfield College, Redfield, S. Dak. Commercial law.
212. University of South Dakota, Vermillion, S. Dak. Junior: International law.
213. U. S. Grant University, Chattanooga, Tenn. Senior: Constitutional and international law.
214. Southwestern Presbyterian University, Clarksville, Tenn. Constitutional and commercial law.
215. Hiwassee College, Tenn. Commercial law.
216. Cumberland University, Lebanon, Tenn. Junior: International law.
217. Bethel College, McKenzie, Tenn. Senior: International law, commercial law.
218. Maryville College, Maryville, Tenn. Senior: Constitutional and international law.
219. Christian Brothers' College, Memphis, Tenn. Commercial law.
220. Vanderbilt University, Nashville, Tenn. Senior: International law.
221. University of the South, Sewanee, Tenn. Commercial law.
222. Greeneville and Tusculum College, Tusculum, Tenn. Junior: International law.
223. Washington College, Tennessee. Senior: International law.
224. Howard Payne College, Brownwood, Tex. Senior: International law.
225. Fort Worth University, Fort Worth, Tex. Senior: International law, commercial law.
226. Southwestern University, Georgetown, Tex. Commercial law.
227. Trinity University, Tehuacana, Tex. Senior: International law, commercial law.
228. University of Utah, Salt Lake City, Utah. Senior: International law.
229. University of Vermont, Burlington, Vt. Senior: Constitutional and international law.
230. Middlebury College, Middlebury, Vt. Senior: Constitutional and international law.
231. Roanoke College, Salem, Va. Sophomore: Commercial law. Senior: International law.
232. Colfax College, Colfax, Wash. Commercial law.
233. West Virginia College, Flemington, W. Va. Senior: International law.
234. West Virginia University, Morgantown, W. Va. Senior: Constitutional and international law.
235. Lawrence University, Appleton, Wis. Senior: Constitutional and international law, commercial law.
236. Beloit College, Beloit, Wis. Senior: International law.
237. University of Wisconsin, Madison, Wis. Elementary, constitutional, international, and Roman law.
238. Marquette College, Milwaukee, Wis. Commercial law.
239. Ripon College, Ripon, Wis. Sophomore: Constitutional law.
240. University of Wyoming, Laramie, Wyo. Senior: Constitutional and international law.

IV. THE LAW MATRICULATE EXAMINATION IN NEW YORK.¹

[Generally known as the "Law Students' Examination."]

In New York the legislature early² conferred upon the trustees of the colleges or universities having departments of law the power of granting degrees in law and otherwise regulating the admission to and the course of study of their law departments. Nor was the degree when obtained a mere empty honor; for, when it was a testimonial that the holder had, in addition to passing an examination successfully, spent eighteen months in the study of law, it admitted him to the bar. This right, however, was withdrawn in 1882. After that date the State resumed the exercise of the power to inquire into the professional qualifications of applicants for admission to its bar; and it is the purpose here briefly to relate the manner in which the State has also taken upon itself the duty of systematically testing the literary qualifications of persons who are applicants for admission to its schools of law, or who are elsewhere pursuing the study of jurisprudence.

Before entering upon this topic, however, it is but justice to call attention to the action of Columbia College in 1876, touching the literary attainments of its matriculates in law. The annual announcement of that institution for 1874-75 contained the usual information that any person of good moral character, whether a college graduate or not, might be admitted to either class of the law department, for "no examination and no particular course of previous study were required for admission." But this was not all the catalogue told its readers on this point. On and after the first Wednesday in October, 1876, the requisites for admission were to be considerably advanced. All college graduates, it is true, were then to be admitted without examination, but other candidates for matriculation were to be at least eighteen years of age and "must have received a good academic education, including such a knowledge of Latin as is required for admission to the freshman class of the college, viz, 4 books of *De Bello Gallico*, 6 books of the *Æneid*, and 6 orations of Cicero." To insure that the candidate had had this amount of instruction, three examiners, alumni of the college appointed by the law faculty, were to examine him in the history of Greece, Rome, England, and America, English grammar, rhetoric, and composition and in Latin.³ This action of Columbia is noteworthy; for it required fifteen years for the State to become convinced of the necessity of the reform thus inaugurated in New York in 1876 by a private corporation at its own pecuniary risk. The college accomplished it at a bound, as it were; the State worked up to it.

In 1871 it became the duty of the judges of the court of appeals of New York⁴ to establish such rules and regulations as they might deem

¹ Prepared by Mr. Wellford Addis.

² Laws of 1859, Chap. 267 (University of Albany); Laws of 1860, Chap. 202 (Columbia College), and more generally by sec. 58 of the Code of Procedure of 1876.

³ Statutes of 1878, p. 43.

⁴ Laws of 1871, chap. 486.

proper in relation to the admission of persons applying to be admitted as attorneys, solicitors, and counselors in the courts of the State. Among the rules established by the court in pursuance of this act¹ was one requiring that all persons not holding the diploma of a law college of the State² should be examined by the court or by a board composed of three or more practicing lawyers of the State, of seven years' standing at the bar, appointed by it. But in 1882, "in response to a general demand," the court adopted a rule which brought the regents of the University of New York (a method of State control rather than a university) into direct connection with the law departments of the higher institutions of learning of the State. By this rule it was ordered that before any person, not a graduate of a college, could enter upon "a clerkship" (reading in an office of a practicing attorney) or upon a substituted course of study (as at a law school), or within three months after entry upon such a course, he must pass a regents' examination in arithmetic, grammar, geography, orthography, English and American history, and English composition, and file a certificate of the fact signed by the secretary of the board of regents and countersigned by the examiner.

In the circular issued by the regents in regard to "Examinations on subjects preparatory to the study of the law as required by the rules of the court of appeals," it is stated that special examinations for law students only would be held in each judicial department. As the subjects required by the rules of the court were also a part of the system of academic examination held at stated times during the year, the intending law student was allowed to enter them. To insure success the candidate was advised to master a "standard school text-book" on each subject required. To pass he must answer correctly 75 per cent of the questions "in all subjects" and spell correctly 85 out of 100 words contained in the papers placed before him, and finally "must make and subscribe" to a declaration printed on each sheet of questions to the effect that he had no previous knowledge of the questions on the paper, that he had answered them without aid from any source, and had spent no more time than that marked by himself in answering them. To those successfully passing in all the subjects the Regents gave a special certificate, known as the law student's certificate, made in duplicate one copy of which was retained by the clerk of the court of appeals and the other sent by that functionary to the candidate.

It is impossible to say at this date what purpose the court of appeals had when permitting a grace of three months to the law student in filing his regent's certificate. Yet it might seem probable (barring the case of men of middle age) that it was introduced not for the purpose of allowing him the necessary time to prepare himself in the studies required by the rule—his time being fully occupied by the study of law—but rather to allow him to enter upon his "clerkship" at any time, irrespective of the time of the regent's examination. At one school at least

¹Appended Laws, 1871, p. 2194 (vol. 2.)

²Albany University and Columbia College law departments.

no previous course of study was required nor was an examination held as to the qualification of a matriculate, he being informed that he had three months in which he could comply with the rule of the court. Indeed, the probability that the months of grace were intended as months of double work—an unfortunate combination of the studies of the grammar school and Blackstone's lectures to university men—is almost made a certainty when we find that the new rule of the court of appeals adopted March 19, 1891, lengthens the time of grace from three months to twelve, the additional nine months being allowed to enable the student to get up the "first-year Latin" required. To this rule, however, we must now turn.

In the rule of 1882 the court had demanded a good grammar-school education; in the rule of 1891, it asks, in addition, for a "first-year Latin," geometry, and civics. The Latin required is meager, by no means to be called academic, and is such as is taught in preparing the student to read Cæsar. In geometry, "plane geometry" is completed, and in civics "daily work for half a school year is allowed." If a student has completed a full year's course at a college under the supervision of the regents of the University of New York, or in an extra State college recognized by it as having a satisfactory standard, or if he has completed a three years' course in any institution subject to the visitation of the regents or recognized by it, or if he has a regent's diploma, or a regent's pass card for any 22 counts, of which 4 are for a foreign language, 7 for mathematics, and 7 for the historic groups, or has a pass card for any 30 academic counts—that student may offer them as "substantial substitutes" for the matters required by the new rule of the court of appeals.

Other changes appear. The regents send the certificate to the successful candidate, who forwards it to the clerk of the court of appeals at Albany, who files it and returns a duplicate. If the student, after finishing a subject, fails to make and subscribe to the somewhat modified form of declaration of honesty, the set of answers for that subject is thrown out.

V. LEGAL EDUCATION IN THE COMMON SCHOOLS.

Specific legal instruction is not offered in the public schools, yet the course of study in "civics" or civil government has such a relation to the subject as to justify the insertion here of the following matter from the Report of the Commissioner of Education for 1888-89, pp. 384-387:*

"Civil government is a separate branch of instruction in twenty-two of the eighty-two cities that reported; its principles are taught in many more—nearly all, perhaps—incidentally, in connection with history, geography, or, like science and general history, as a part of the supplementary reading. The object of such instruction is declared to be better preparation for the duties of citizenship. In its usual applica-

*Prepared by Mr. J. C. Boykin.

tion the subject embraces only the nature and forms of government, and the provisions of the Constitution of the United States, and that of the pupil's own State; but the study may be, and sometimes is, so broadened that it not only covers the elements of political science, but also trenches upon the domain of ethics. Several excellent text-books have been prepared, but they are not extensively used except as books of reference, the instruction being chiefly oral, frequently in accordance with a general plan or a syllabus prepared by the superintendent. One of the best of these syllabuses is that which appears in the manual of the course of instruction in the grammar department of the Philadelphia public schools.¹ The instruction in that city is given in one year only, the eighth, and follows the topical method throughout. No text-book is used, but each pupil has constant access to the Declaration of Independence, the Constitution of the United States, and the articles of the State constitution.

"Appended to the syllabus, in addition to the usual instructions relating to the teaching of the subject, are (1) a list of special terms of frequent occurrence, (2) a list of eminent men connected with the history of the Constitution, (3) a chronological table relating to the adoption of the amendments, (4) a table of parallelism between the Constitution and the Articles of Confederation, and (5) a list of books of reference recommended for the use of the teachers of the subject. In the last list appear: Andrew's Manual of the Constitution of the United States, Stern's Constitutional History and Political Development of the United States, Miss Dawes's How We Are Governed, Alton's Among the Law-makers, Fiske's American Political Ideas, Scott's Development of Constitutional Liberty in the English Colonies of America, Frothingham's Rise of the Republic of the United States, Greene's Historical View of the American Revolution, Curtis's History of the Constitution, Bancroft's, Hildreth's and Schouler's histories of the United States, and Story's Commentaries on the Constitution.

"The use of a syllabus of this kind by an intelligent teacher willing to follow the suggestions that accompany it must result in such effective teaching that text-book instruction would seem dull and insipid by contrast. What good office could a formal text-book perform for a teacher familiar with all the literature named?

"Mr. R. W. Stephenson, in his report for 1887-88, as superintendent of public instruction of Columbus, Ohio, very thoroughly discussed the importance of training for citizenship, laying particular stress upon the cultivation of the virtues of obedience to rightful authority, integrity, industry, and patriotism. He would have instruction also in the forms and methods of government, but he believes that the possession of the virtues named is more necessary to the citizen than a mere knowledge of any particular system of laws. He therefore urges that the teachers aim particularly at the inculcation of these desirable qualities in order that their pupils may be the better as citizens.

¹ See syllabus on p. 443.

"In regard to this view, it may be said that the instruction recommended is only what is commonly called "moral training," with a special and rather limited application, *i. e.*, the good of the State.

"There is no difference of opinion in regard to the duty of the school to foster and cultivate all the virtues, but there is a difference of practice in regard to the incorporation of such training with the study of political science. The latter, as it is generally taught, aims merely at giving the pupil a knowledge of the manner in which the country is governed, how its officers are chosen, and what relation he himself bears to the conduct of public affairs.

"The cultivation of patriotism is, of course, an end in whose accomplishment the study of our government is expected to aid, but that moral training which leads to habits of obedience and industry and integrity of character is presupposed. The moral man will be moral in the exercise of his privileges and in the discharge of his duties as a citizen; therefore, in most courses we find that general morality is constantly inculcated, but that no special attention is paid to political morality as separate from morality in all other walks of life.

"As to the time for beginning, we find that in Denver, Washington, Detroit, East Saginaw, Minneapolis, Camden, Brooklyn, Milwaukee, and Philadelphia, only the pupils of the eighth-year class are permitted to pursue the study. In San Francisco, Cal., Atchison, Kans., Lynn, Mass., and Salt Lake City, Utah, two years are given to the subject. In Quincy, Ill., West Des Moines, Iowa, Baltimore, Md., Lawrence, Mass., and Jersey City, N. J., three years. In Wichita, Kans., and New Orleans, La., four years.

"The time per week varies from a half hour in San Francisco, New Orleans, and Baltimore, to $3\frac{1}{2}$ hours in Detroit and $3\frac{1}{2}$ hours in Milwaukee. As a rule, the time per week is short where the number of weeks is great and *vice versa*, so that the total time given to the subject is remarkably uniform

"The main points of the syllabus used in Philadelphia are as follows:

NATURE AND FORMS OF GOVERNMENT.

- I. Government: What is meant by the term; social nature of man; necessity of civil government; what is meant by the constitution of a nation; what a law is.
- II. Different forms of government: (1) Monarchical; (2) aristocratic; (3) democratic; (4) republican; combinations of different forms.

COLONIAL GOVERNMENT.

- I. Political organization of the colonies: Three forms of colonial government; (1) Provincial (royal); (2) proprietary; (3) charter.
- II. Differences produced by these forms of government; superiority of political institutions resulting from the charter form of government; town system of New England a pure democracy; a local legislature, with one branch elected by the people, common to all three forms.

FIRST ATTEMPTS OF THE COLONIES AT UNION.

- I. Absence of political connection between the colonies.
- II. The first Continental Congress, 1774; necessity of association; steps taken.
- III. The second Continental Congress, 1775: (1) Duration; (2) measures adopted.
- IV. The Declaration of Independence, July 4, 1776. Its contents and object.

ARTICLES OF CONFEDERATION.

- I. Difficulties of carrying on the Revolution resulting from the absence of union between the States; necessity for a general government.
- II. The Articles of Confederation; principal features.

CONSTITUTION OF THE UNITED STATES OF AMERICA.

- I. Circumstances which led to the adoption of the Constitution: (1) Defects of the Articles of Confederation; (2) functions performed by the Articles of Confederation in accustoming the States to associated action and in leading to "a more perfect union."
- II. Convention of delegates for the purpose of "revising the Articles of Confederation," etc.; different plans suggested; discussion of these; final completion of the Constitution.
- III. Constitution of the United States of America adopted to go into effect when ratified by nine States; order in which the States acted.
- IV. Preamble of the Constitution.

BRANCHES OF THE UNITED STATES GOVERNMENT.—(1) Legislative; (2) Executive; (3) Judicial.

Legislative branch.

- I. Vested in Congress, consisting of (1) House of Representatives, (2) Senate.
- II. House of Representatives: (1) Composition. (2) Powers: (a) Legislative—concurrent, exclusive; (b) impeachment; (c) elective—officers, President of the United States.
- III. Senate: (1) Composition. (2) Presiding officer. (3) Powers: (a) Legislative; (b) executive—appointments, treaties; (c) elective—officers, Vice President of the United States; (d) judicial.
- IV. Law-making: Methods; orders; resolutions; votes.
- V. Powers granted to Congress.
- VI. Powers denied to Congress.
- VII. Powers denied to the several States.

Executive branch.

- I. In whom executive power is vested; term of office, salary, oath.
- II. Eligibility.
- III. How elected: (1) By electors; (2) by House of Representatives.
- IV. How removable.
- V. Powers and duties of President: (1) Military; (2) civil.
- VI. Vice-President: (1) Eligibility, term, oath; (2) how elected; (3) powers and duties.

Judicial branch.

- I. Where vested: (1) Supreme Court. (2) Inferior court: (a) Circuit; (b) district.
- II. Judges: (1) How appointed; (2) term of office, salary, oath; (3) how removable.
- III. Jurisdiction: (1) Limitation; (2) original; (3) appellate.

RELATIONS BETWEEN THE STATES AND THE FEDERAL GOVERNMENT.

- I. Public acts, records, and judicial proceedings of States.
- II. State citizenship.
- III. Fugitives from (1) justice, (2) service.
- IV. Formation and admission of new States (Territories).
- V. Guaranty and protection to the States.

MISCELLANEOUS PROVISIONS.

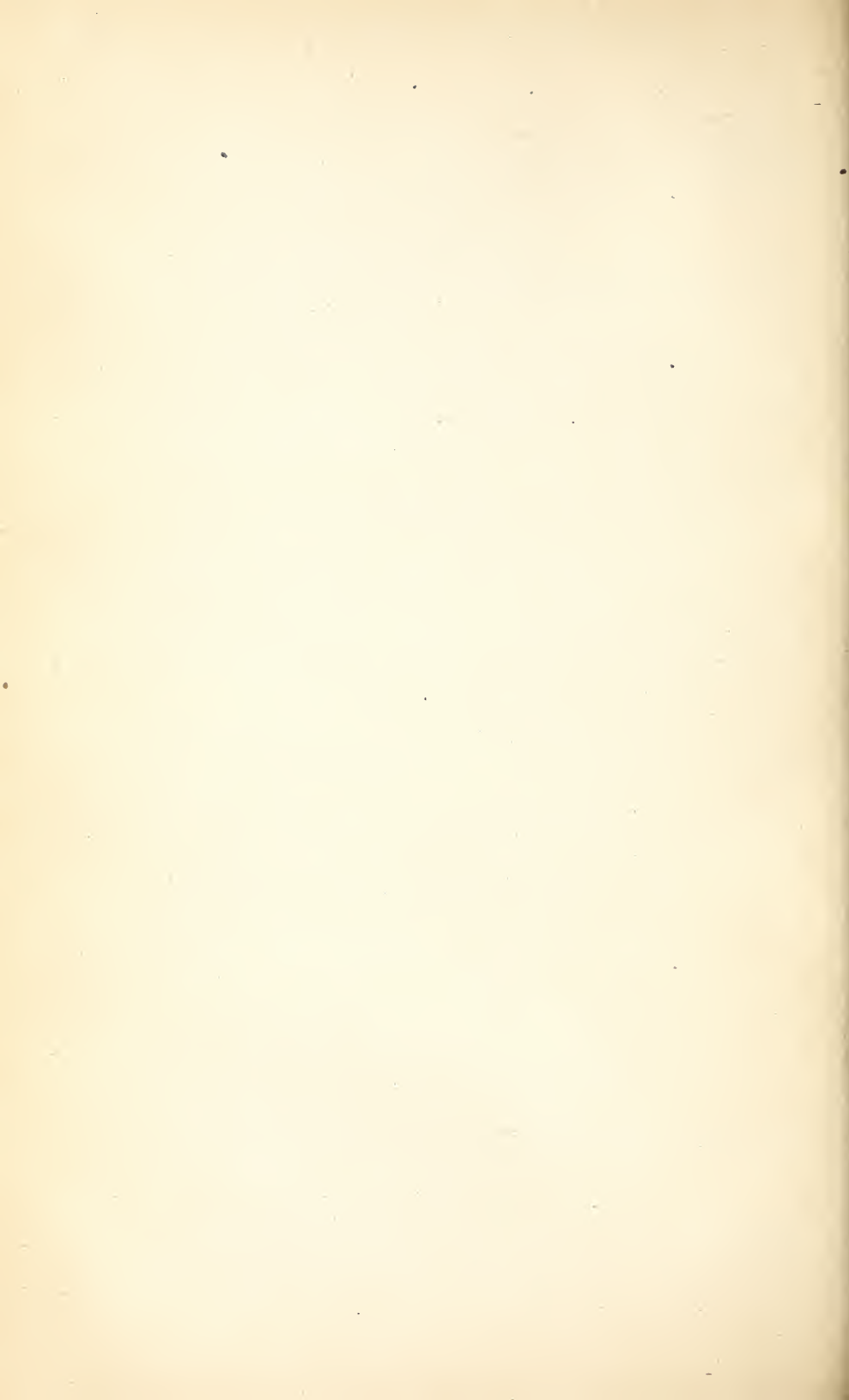
- I. Supremacy of the Constitution.
- II. Guaranty of personal rights.
- III. Abolition of slavery.
- IV. Enfranchisement of negro citizens.
- V. Validity of the public debt.
- VI. How may the Constitution be amended.

CONSTITUTION OF THE COMMONWEALTH OF PENNSYLVANIA.

- I. Historical notes.
- II. General analysis.
- III. Analogies between the Federal and the State government.

Time allotted to the study of civil government in the common schools:

San Francisco, $\frac{1}{2}$ hour per week in seventh and eighth years of school; Denver, 1 hour per week in eighth year of school; Washington, $2\frac{1}{2}$ hours per week in eighth year of school; New Orleans, $\frac{1}{2}$ hour per week in fifth, sixth, seventh, and eighth years of school; Baltimore, $\frac{1}{2}$ hour per week in sixth, seventh, and eighth years of school; Detroit, $3\frac{1}{2}$ hours per week in eighth year of school; Minneapolis, $1\frac{1}{2}$ hours per week in eighth year of school; Cincinnati, $\frac{1}{2}$ hour per week in eighth year of school; Milwaukee, $3\frac{1}{2}$ hours per week in eighth year of school."



CHAPTER XIV.

LEGAL EDUCATION IN EUROPE.¹

In response to a circular letter, a copy of which is here inserted, a great amount of information, both in writing and in print, has been received relating to legal education in the following countries: England and her colonies, France, Germany, Austria, Switzerland, Portugal, Italy, Russia, Denmark, Norway and Sweden. Copies of the circular letter in English and French were sent to the ministers of public education or instruction in the countries referred to. In many instances the letter was by the ministers referred to the faculties of law of the universities, the deans or librarians of which confined their reply to sending printed catalogues and regulations. Very few entered into a minute reply to the questions submitted, so that it becomes necessary to confine this summary statement concerning legal education abroad to a few essential points. For the sake of convenience the matter is grouped under the following heads:

Requirements for Admission to the Study of Law in Europe.

Statistics of European Law Schools, 1890-1891, showing number of professors and students, and proportion of those who fail. Names and location of law schools. Expenses of students.

Proportion of law students to population.

Entering the profession and grades of lawyers

Sources of jurisprudence in Europe.

Courses of study in law.

Methods of instruction. To this is added a list of questions used in Cambridge and in the inns of court, London, England.

The Circular of Inquiry.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., February 28, 1891.

In the summer of 1890 the American Bar Association directed its committee on legal education and admissions to the bar to prepare a report on legal education. At the request of that committee, this Office submits the subjoined inquiries respecting the teaching and study of the law to educational officials in various countries

¹Compiled, translated, and in part composed by Dr. Klemm. See note to Chapter XIII, page 376.

and to institutions in which legal studies are pursued. Any information furnished will be gratefully received, and a printed copy of the committee's report will be sent to each official and institution contributing to the same. An early reply will be appreciated, as the information will be needed in April.

Respectfully,

WM. T. HARRIS,
U. S. Commissioner of Education.

1. The committee would be pleased to have all the information conveniently to be procured from the following countries:

A. The United States; each of the States and Territories.

B. England, Scotland, Ireland, autonomous colonies of England, especially Canada; the Australian colonies and New Zealand; Hindustan and Burmah.

C. France, Spain, Italy, Portugal, Holland, Greece, Germany, Austria, Hungary, Sweden, Norway, Denmark, Russia, Japan, and China.

D. Such other countries as may be reached.

2. In each of the countries named all the information practicable regarding the number of institutions teaching jurisprudence, with the number of instructors and students in jurisprudence.

A. The number and names of such institutions.

B. The following information about each:

1. (*a*) Number of instructors in jurisprudence. (*b*) Grades of instructors; the duties of each grade. (*c*) Have such instructors, or any of them, other occupations as practicing lawyers, or is their entire time devoted to such institutions. (*d*) Remuneration of such instructors; amount of salary or remuneration of each grade. Is it paid by fees of students, or is it a fixed salary?

2. (*a*) Number of students. (*b*) Average age of students. (*c*) Fees of students; tuition; library; other fees. (*d*) Other expenses of students, giving as far as possible the cost of a legal education, including the personal expenses of students for board, etc.

3. Income of such institution, and whence derived. (*a*) Endowment. (*b*) States grant. (*c*) Fees of students. (*d*) Other revenues.

4. Expenses of such institution. (*a*) Salaries of instructors. (*b*) Rent of buildings, etc. (*c*) Other expenditures under head of expenses.

5. Library of such institution. Number of volumes; annual increase, etc.

3. Qualifications of persons desiring to enter such institutions as students of jurisprudence.

A. Age and personal requirements.

B. Previous education. (1) Studies required. (2) Length of such preliminary study. (3) Whether required to be in institutions under Government supervision or by other methods.

C. Other requirements.

4. Course of study in such institutions and degrees conferred, etc.

A. (1) Number of years in course. (2) Length of scholastic year. (3) Number of exercises per week and length of same. (4) Number of hours devoted to each of the principal subjects of study. (5) Order in which studies are pursued. (6) Division of students into classes. (7) Method of teaching in such institutions, whether by lectures, recitations, practical exercises, etc.

B. Examinations. (1) The frequency of and method of examination pending the course. (2) Are the examinations at the close of the course conducted by the instructors of the students or by others? If the latter, by whom?

C. (1) Degrees conferred and requisites for attainment of each. (2) Privileges attached to each degree.

5. Government of students.

A. Supervision of studies, by whom exercised, and extent of.

B. Supervision over conduct.

C. By whom are offenses tried?

D. Punishments.

6. A. For what occupations is the course in jurisprudence intended to qualify students?

B. The requisites for admission to each occupation; what restrictions as to age, sex, citizenship, etc.

C. Are there any other methods of entering those occupations where such institutions exist? If so, in what do they differ from those already referred to?

D. If no institutions exist, how are persons educated for the legal profession?

7. Is any auxiliary study, such as study in an office of a practicing lawyer, or other study intended to give students practical knowledge, required, or if not required, is it the custom? If so, what is the extent of such study and the regulations or customs governing it?

8. The division or grades of lawyers (barristers, attorneys, etc.) with the requisites to enter each grade.

9. How far are the institutions referred to under the supervision or control of the State? How far is the conferring of degrees controlled or restricted by the State?

10. May persons intending to follow any of the occupations referred to in paragraph 6, A, pursue their professional studies under individual instructors without connection with any such institution?

11. Is admission to the occupations referred to restricted as to citizenship? If foreigners admitted, on what terms.

12. The societies among the students for mental improvement; the membership and character of such societies.

NOTE.—The committee would like to have any catalogues or other printed matter relating to legal education, intended for the information of the public, published by the institutions or by Governments referred to.

II. REQUIREMENTS FOR ADMISSION TO THE STUDY OF LAW IN EUROPE.

Admission to the bar in all continental countries is obtained through the universities which are professional schools for the four learned professions—theology, medicine, law, and philosophy. In England and America the colleges and universities are chiefly schools for general culture; only a few offer provision for thorough professional studies. While in England and America the erroneous idea is still predominant that a collegiate education need not necessarily precede professional study, in continental Europe it is made a *conditio sine qua non*. Each continental university is divided into faculties (law, theology, medicine, philosophy), though not everyone has all the four faculties. A few have only two faculties (law and theology, or medicine and law). To become a lawyer a young man must have graduated in jurisprudence at a university. No bar examination is held, but the degree admits him to the bar unless he aspires to a Government position in either the judicial or the executive branch; in that case the candidate has to pass through rigorous state examinations.

The requisites for admission to the university are substantially the same in Germany, Austria, and Switzerland. In France and Italy they are not quite so extensive, but may still be considered to be a collegiate or classical education. In Spain, Belgium, Holland, Denmark, Sweden, Norway, and Russia, this preparatory education is similar, embracing the classical languages, the higher mathematics, natural science, and history, geography, and history of the world. In some countries this secondary education is more thorough than in others, but essentially it is the same in all countries.

In England secondary education has never become public education. From six to twelve years of age the boy attends an elementary school (either a board or a church school, both of which are aided by public grants). An examination determines the close of the elementary period. He then enters one of the numerous undefined and unclassified secondary or preparatory schools, or (if his means allow him) one of the so-called public schools (Eton, Harrow, etc.), or studies at home under a tutor. It is quite immaterial to the authorities, how or where he obtains his preparation. An examination determines his fitness for admission to the study of law. The following rule is in force in the inns of court:

“Admission of students: Every person, not otherwise disqualified, who shall have passed a public examination at any university within the British dominions, or for a commission in the Army or Navy, or for the Indian civil service, or for the consular service, or for cadetship in the three Eastern colonies (Ceylon, Hongkong, and the Straits Settlements) shall be entitled to be admitted as a student without passing a preliminary examination. Every other person applying to be admitted as a student shall, before such admission, have satisfactorily passed an examination in the following subjects: The English language, the Latin language and English history. Such examination shall be conducted by a joint board, to be appointed by the four inns of court.”

In France the preparatory course of a law student is as follows: The primary school concludes its course with the pupil's twelfth year of age, but most of those who intend to pass through secondary schools enter special preparatory elementary schools, and at the age of ten years enter a lyceum, the course of which is usually completed at the close of the eighteenth year of age. Graduation from a lyceum entitles to admission into the University of France, that is, into any of the numerous “*facultés*” or parts of the great university that embraces the academic and professional instruction of entire France. An *outline of a course of study pursued in lyceums in France* is here inserted to show the requirements of admission to the study of law, a study which lasts from three and a half to four years.

(1) *French*.—Grammar finished; extracts from French classics, poetry and prose; compositions, literary and scientific; prosody.

(2) *Latin*.—Grammar, prosody; extracts from Phædrus, Ovid, Nepos, Virgil, Caesar's

Gallie War, Quintus Curtius, Lucretius, Livy, Cicero, Horace, Pliny, Sallust, Tacitus; reading, writing, translation.

(3) *Greek*.—Grammar, paradigms and syntax; extracts from Xenophon, Lucian, Homer, Herodotus, Euripides, Sophocles, Plato, Plutarch, Aristophanes, Demosthenes; reading, writing, translation.

(4) *German or English*.—Grammar. *English texts*.—First year: Edgeworth's Tales, Aiken and Barbauld's Evening's at Home, Primer of English History. Second year: Scott's Tales of a Grandfather, Franklin's Autobiography, Primer of Greek History. Third year: De Foe's Robinson Crusoe, Irving's Voyages of Columbus, History of Rome. Fourth year: Vicar of Wakefield, Tales from Shakespeare, Macaulay's History of England, Vol. I. Fifth and sixth years: Julius Cæsar, The Deserted Village, The Traveller, A Christmas Carol, David Copperfield, Extracts from English historians. *German texts* similar to the English.

(5) *History*.—First year: Ancient History of the Orient—Egypt, Assyria, Palestine, Phœnicia, Persia. Second year: Greece. Third year: Rome. Fourth year: Europe, particularly France from 395 to 1270 A. D. Fifth year: Same up to 1610. Sixth year: Same up to 1789. Seventh year: Cotemporary history and philosophy.

(6) *Geography*.—First year: Europe and the Mediterranean basin; the oceans. Second year: Topography of Africa, Asia, Oceania, and America; principal states, cities, commercial ports, European possessions. Third year: Topographical and political geography of France and Algiers. Fourth year: Physical, political, and commercial geography of Europe. Fifth year: The other continents. Sixth year: Physical, political, and commercial geography of France and its colonies, also administrative and economical aspects.

(7) *Arithmetic and mathematics*.—First year: Review of fundamental rules; common and decimal fractions; mensuration; elements of mathematical geography. Second year: Rule of three, percentage, simple interest, discount, mensuration of solids; arithmetic completed. Third year: Plane geometry. Fourth year: Algebra through fractions, plane geometry completed. Fifth year: Algebra through equations of the second degree; solid geometry. Sixth year: Geometry and trigonometry; cosmography or astronomy. Seventh year: Review of entire course in mathematics with practical applications.

(8) *Natural history, physics, and chemistry*.—First year: Zoölogy (vertebrata and articulata). Second year: Botany, grand divisions of vegetable kingdom (phanerogamia and cryptogamia). Third year: Geology. Fourth year: Physics, properties of matter, mechanics. Fifth year: Physics, electricity, magnetism, acoustics. Sixth year: Chemistry, inorganic and organic. Seventh year: Physics and chemistry, optics, and review of both sciences extended in practical applications. Anatomy and physiology of animals and plants.

(9) *Philosophy* in seventh year: This course consists of lectures and the reading of one Latin, one Greek, and two French authors. It includes an account of sensibility, intelligence, and volition, of formal and applied logic, of conscience and duty, family and country, of political duty, of labor, capital, and property, of immortality and natural religion.

(10) *Drawing*.—First and second years: Perspective with shadows, drawing from ornaments in relief, from architectural fragments, from the human head. Third year: From architectural fragments, the human body, from prints of bas-reliefs; some mechanical drawing of architectural designs. Fourth, fifth, and sixth years: Decorative figures, caryatides, friezes, Doric, Ionic, and Corinthian columns, the human figure, and figures of animals.

In Germany and Austria the boy, after completing his elementary education, enters a *gymnasium* (classical secondary school), a typical course of which is here submitted in outline:

(1) *Religion*.—Biblical history of the Old, and especially the New Testament; cat-

ecchism, with Bible verses [and quotations from tradition], serving as evidence; the movable festivals of the church; memorizing of favorite selected hymns; acquaintance with important contents of the holy Scriptures, especially the New Testament, of which leading chapters are to be read in the original text; acquaintance, also, with the undisputed facts concerning the origin of the different books of the Bible; main points of religious ethics and the creed; knowledge of the chief epochs of church history and its distinguished representatives [notably the lives of the great saints].

(2) *German*.—Knowledge of the most important rules of etymology and syntax; acquaintance with the great epochs of the national literature; reading of classical works of modern literature, poetry, and prose; memorizing of selected ballads and memory gems; acquaintance with the forms of poetry and prose; correct use of written language for the purpose of expressing one's own thoughts, and in composing essays on subjects lying within the student's own compass of thought and experience; simple rhetorical practice and oral discussion of themes after due preparation in writing.

(3) *Latin*.—Facility in the application of etymology and syntax; acquisition of a vocabulary sufficient for the comprehension of the writings of the classic period (as far as their contents are not specifically technical), and for the pursuit of professional studies, as well as sufficient for the acquisition of modern languages derived from Latin; reading of selected number of noted works of classical literature suitable to the degree of proficiency of the students. This reading, going hand in hand with grammatical analysis, should lead both to comprehension of the contents and appreciation of the form. Skill in writing Latin within the limits of expressions learned by reading. Compositions should be made with some degree of ease and without coarse inaccuracies.

(4) *Greek*.—Facility in the Attic etymology and acquaintance with that of the epic dialect; knowledge of the fundamental rules of syntax; acquisition of a sufficient vocabulary; reading of the most noted works in classical literature, poetry, and prose, so that an abiding impression is caused of the value of Greek literature and its influence upon the development of the various modern literatures.

(5) *French*.—Facility in French etymology and the fundamental rules of syntax; acquirement of a vocabulary which will enable the students to understand French books of not too difficult a style, and ability to speak and write French within certain limits. No coarse inaccuracies should occur in this.

(6) *Hebrew* (an optional study).—Instruction in Hebrew is offered in the two highest grades only. Its aim is: Elements of etymology; reading of easy selections from the Old Testament.

English is omitted.

7. *Arithmetic and mathematics*.—Facility in operating with denominate numbers and business rules. Application of arithmetic in every-day occurrences of practical life. Arithmetic up to the development of the binomial theorem, and algebra to equations of the second degree (inclusive). Plane and solid geometry, plane trigonometry. In all these branches attention is to be paid not only to knowledge resting on a firm basis of thorough comprehension, but also at skill in its application.

(8) *History*.—Knowledge of great events in the history of the world which caused epochs; biographies of leading personages in them, chiefly from the Greek, Roman, and German history. Knowledge of important dates, and thorough acquaintance with the seats of historical occurrences.

(9) *Geography*.—The principles of mathematical geography. Knowledge of important topographical conditions of the earth, and the relations between these conditions and the present political divisions. More extended knowledge of central Europe in both its topographical and political aspects.

(10) *Natural history*.—*Botany*: Knowledge of the most important families of the natural system and of the classes of the artificial system of Linné. Analysis of plants.—*Zoölogy*: Knowledge of the most important orders of the classes of verte-

brates; also, some representatives of other classes of the animal kingdom. *Mineralogy*: Knowledge of the simplest crystal forms, particularly of important minerals.

(11) *Physics and chemistry*.—Knowledge of important phenomena and laws from the various branches of physics; also, the simplest parts of chemistry. The essentials of physical geography.

(12) *Drawing*.—Practice of the eye in recognizing forms, and practice in measuring with the eye. Skill in correct imitation of flat-surfaced ornaments and of simple solids.

NOTE.—In Gymnasium, drawing is obligatory in the lowest grades; in the upper ones it is an elective study.

(13) *Gymnastics*.—Calisthenics, marching, and gymnastics with apparatus. Obligatory for all grades.

(14) *Vocal music*.—Songs of four parts. Theory of music. Students of the upper grades are excused from this.

In Switzerland the secondary schools are similar to those of Germany and France. They are called cantonal schools, being usually located in the center of a canton and maintained by the cantonal government.

In order to see how rigorously the universities guard their doors from intruders not properly qualified to take up professional studies, the conditions of admission to the University of Geneva are quoted here:

(1) Students are matriculated without examination for admission, if they have obtained a diploma of graduation from the classic or modern section of the Geneva gymnasium. (2) The bachelors of letters of the University of Geneva are also admitted without examination. (3) All those who show by diploma or certificate that they have gone through a course of study equivalent to 1 and 2, either in Swiss or other classical schools. (4) Nonmatriculated students, so-called auditors or special students may be admitted to lectures on special subjects, provided they have reached the required age, but they can not graduate nor participate in the official benefits arising from university study.

In Italy secondary education is offered in the "Ginnasi" and "Licei." The course of study in the ginnasi and licei extends through eight years; the first five in the ginnasio, then three in the liceo. The gymnasial studies are Italian, Latin, Greek, arithmetic, history, and geography, and the elements of instruction in Roman and Greek archæology. The studies of the liceo tend toward a higher development, for they cover philosophy, mathematics, physics and elements of chemistry, Italian, Roman, and Greek literature, history and geography, and natural history. Drawing and modern languages are optional branches. Gymnastics are obligatory if the student desires to be admitted to the examinations. The "licenza ginnasiale," or graduation diploma from the ginnasio, is required for a number of employments under government. The "licenza liceale," or graduation diploma from the "liceo" is required for admission to the university.

In Belgium, Holland, Denmark, Norway and Sweden, as well as in Spain, Hungary, the Balkan Principalities, and Russia, secondary schools, called variously lyceums, gymnasiums, classical schools, or

preparatory schools prepare for the university, which in all these countries are professional schools or higher seats of learning. Belgium and Spain follow the example of France and Italy; while Holland, Denmark, Norway and Sweden follow that of Germany, in their requirements for admission to the university. There certainly are differences in the various courses of study of secondary schools, one country laying more stress upon modern languages, another upon ancient languages, but essentially they offer a collegiate education (Latin and sometimes Greek, or modern languages, the mother tongue and its literature, arithmetic, and mathematics, natural science and history, geography and history of the world, drawing, music, and gymnastics).

The secondary schools that lead up to the universities or professional schools offer no degrees (except in France and Switzerland), such as B. A., for in continental Europe the degree of doctor is acquired in the university only (L. L. D., Djur., M. D., Ph. D.)

III.—STATISTICS OF EUROPEAN LAW SCHOOLS.

Countries.	Number of law faculties or academies.	Number of professors.	Number of students.
(1) Austria	8 universities	143	5,388
(2) Belgium	4 universities	41	1,381
(3) Denmark	1 university	8	331
(4) France	14 State faculties and 6 free faculties	285	5,238
(5) Germany	20 universities	227	6,804
(6) Great Britain and Ireland	11 universities and colleges .....	.....	.....
(7) Greece	1 university	24	.....
(8) Hungary	3 universities and 10 law academies	144	2,575
(9) Italy	22 universities	425	5,250
(10) Netherlands	4 universities	30	408
(11) Norway	1 university	7	410
(12) Portugal	1 university	20	.....
(13) Roumania	1 university	11	.....
(14) Russia	7 universities	117	1,594
(15) Servia	1 university	6	.....
(16) Spain	10 universities	145	.....
(17) Sweden	3 universities	17	562
(18) Switzerland	6 universities	70	495

Proportion of law students who fail in examination.

In Austria.—In 1889-90 (latest report available) 1,854 senior students of law submitted to the “rigorosa,” or examination for graduation. Of these 1,854 students 89.5 per cent, or 1,659 passed; 195, or 10.5 per cent, failed.

This refers to all the eight universities of Austria, without Hungary. The examination for lawyers intending to enter state service, either in the judicial or the executive branch of the government comprised three groups: (a) Candidates of history of law; (b) candidates of jurisprudence, and (c) candidates for administrative offices. Group (a) had 1,204 candidates, of which 194, or 16.1 per cent failed; group (b) had 661 candidates, of which 112, or 16.9 per cent failed; group (c) had 593 candidates, of which 54, or 9.1 per cent failed.

In Hungary.—In 1889-90 (latest report) 1,074 law students were examined, of whom 857 passed, while 217, or 20.2 per cent failed.

In Germany.—No official data are published, but according to Prof. Lexis 13 per cent of the enrolled students fail to finish the course, 9 per cent of those who finish the course fail in examination, 12 per cent of the graduates fail in the first state examination, and, according to Judge F. Werner, 18 per cent fail in the second state examination. This refers to the Kingdom of Prussia only. No statistics are available for the entire empire.

In France.—In 1888 (latest report) 1,696 students of law, at the close of the third year's study, submitted to the final examination, which admits to the practice of law; 371, or 21.8 per cent failed. The number of students who devoted an additional year to the study of law, and at the close of it submitted to the examination for the degree of "doctor juris" was 823, of whom 234, or 28.4 per cent failed.

In Italy.—In 1889 (according to "Statistica dell'Istruzione Second. é Superiore" of 1889) 1,113 law students passed out of a total number of students, 5,465, the number of candidates for graduation not being stated. The number 1,113 includes candidates for three different diplomas, to wit: 987 (of 992) received the diploma of jurisprudence, 81 received the diploma of procurator, 65 received the notary's diploma. Now, if 987 of 992 candidates for the diploma of jurisprudence passed, only 5, or less than 1 per cent, failed. This is so exceptional a statement, and so much at variance with the figures found in other countries, that it is here repeated only after some hesitation and upon the authority of the "Direzione Generale della Statistica."

In Norway (according to the "Universitets-og Skole-Annaler" of 1889) the proportion of law students who failed in 1888 was 2.4 per cent (2 out of 82, five of whom had previously attempted the examination and barely passed it; that is, without credit). This indicates that the students have very careful individual treatment during the course, or that they are not admitted to the examination, unless the faculty is reasonably sure that they can pass it.

In Russia the graduate of a university is called "candidate." This is the lowest degree conferred. But students who fail to complete the prescribed course or fail in examination are termed "real students." The proportion of candidates of law to the total number of senior students was only 50 to 52 per cent during the years 1863-'77. This does not include the three non-Russian universities—Dorpat (German), Warsaw (Polish), and Helsingfors (Finland.)

From other countries no reliable data concerning the number of failures are obtainable.

Law schools in Europe.

1. *Austria:* Czernowitz, Gratz, Innsbruck, Krakau, Lemberg, Prague, (German), Prague (Bohemian), and Vienna.
2. *Belgium:* Brussels, Ghent, Liege (or Lüttich), Louvaine (or Lowen).
3. *Denmark:* Copenhagen.

4. *England*: Cambridge, London, Oxford; also the Inns of Court in London, the only official institutions that admit to the bar. (See Ireland, Scotland, and Wales below.)

5. *France*: Aix, Algiers, Bordeaux, Caen, Dijon, Grenoble, Lille, Lyons, Montpellier, Nancy, Paris, Poitiers, Rennes, Toulouse, and free faculties: Angers, Lille, Lyons, Nantes, Marseilles, and Paris.

6. *Germany*: Berlin, Bonn, Breslau, Erlangen, Freiberg, Giessen, Gottingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Konigsberg, Leipzig, Marburg, Munich, Rostock, Strassburg, Tubingen, Wurzburg.

7. *Greece*: Athens.

8. *Hungary*: Agram, Budapest, Klausenburg, L 10 Academies.

9. *Ireland*: Belfast, Cork, Dublin, Galway, and King's Inn in Dublin.

10. *Italy*: Bologna, Cagliari, Camerino, Catania, Ferrara, Florence, Genoa, Macerata, Messina, Modena, Naples, Padua, Palermo, Parma, Pavia, Perugia, Pisa, Rome, Sassari, Siena, Turino Urbino.

11. *Netherlands* (Holland): Amsterdam, Groningen, Leiden, Utrecht.

12. *Norway*: Christiania.

13. *Portugal*: Coimbra.

14. *Roumania*: Bukarest.

15. *Russia*: Charkow, Dorpat. Helsingfors, Kasan, Moscow, Odessa, St. Petersburg, Warsaw.

16. *Scotland*: Aberdeen, Edinburg, Glasgow.

17. *Servia*: Belgrade.

18. *Spain*: Barcelona, Granada, Madrid, Oviedo, Salamanca, Santiago, Sevilla, Valencia, Valladolid, Zaragossa.

19. *Sweden*: Gothenburg, Lund, and Upsala.

20. *Switzerland*: Basel, Berne, Freiburg, Geneva, Lausanne, Neuchatel, Zurich.

21. *Wales*: Lampeter.

Expenses of law students in Europe.

Information on this subject is very meager except from *France*, where the fees for tuition and other fees are as follows :

(1) Students who acquire only a "Certificate of Capacity" pay for 4 inscriptions (at \$6), \$24; 4 library fees (at 50 cents), \$2; 1 examination fee, \$12; 1 certificate of capacity, \$8; 1 certified copy of certificate, \$5; total, \$51.

(2) Students who acquire the degree of "Bachelor of letters" pay for 8 inscriptions (at \$6), \$48; 8 library fees (at 50 cents), \$4; 4 examination fees (at \$12), \$48; 4 certificates (at \$6), \$24; 1 diploma, \$20; total, \$144.

(3) Students who acquire the degree of "Licentiate" pay for 4 inscriptions (at \$6), \$24; 4 library fees (at 50 cents), \$2; 2 examinations (at \$12), \$24; 2 certificates (at \$6), \$12; 1 diploma, \$20; total, \$82.

(4) Students who acquire the degree of "Doctor of Law" pay for 4 inscriptions (at \$6), \$24; 4 library fees (at 50 cents), \$2; 3 examinations

(at \$12), \$36; 3 certificates (at \$6), \$18; 1 thesis, \$8; 1 certificate for thesis, \$6; diploma, \$20; total, \$114.

Duplicates of certificates and diplomas cost half the original cost. Adding these sums we find the total expenses of a doctor of law to be for four years, \$391, or about \$400.

In *Germany*: The following table is interesting as showing the average annual cost of one student at each of the chief universities of the Kingdom of Prussia, and the amount contributed toward this cost by the State. The balance is defrayed from the interest on irreducible funds accumulated by means of endowments and bequests:

	Average cost per student.	State grant.		Average cost per student.	State grant.
Berlin.....	\$130	\$109	Halle.....	\$203	\$118
Bonn.....	189	152	Kiel.....	300	224
Breslau.....	185	162	Königsberg.....	315	267
Göttingen.....	321	112	Marburg.....	198	149
Greifswald.....	297	82			

In German universities, the students pay 20 to 25 marks (\$5 or \$6) for one series of lectures per semester, which amounts to about \$120 a year for annual lecture fees. Besides this they must pay various small fees, aggregating to the sum of \$5. No reliable information is available at present concerning the student's personal expenses, board, etc. Institutions in which the students live and study together, so-called students' halls or colleges, are nowhere found on the continent, while in England they seem to be a necessary adjunct of a university.

In *Austria* the student pays 1 florin (= 35.7 cents) per weekly lecture (or about 26 florins = \$9.28 per semester), which will amount to about \$140 a year for the entire course; besides this a few trifling fees are to be paid. Student halls do not exist in Austria.

In *Hungary* the law academies charge 30 florins, or \$11.70, per year for each branch of the course, which would, if the student takes the entire course, amount to \$117 for ten studies: Roman law, canonical law, civil law, criminal law, administrative law, international law, political economy, and history and philosophy of law. Minor fees, such as matriculation and examination fees are not included in the foregoing.

In *Italy* the entire expenses of a law student for matriculation, instruction, examinations, and diploma, amount to 860 liras, or \$172 for the entire course.

In *Belgium* the annual fees for lectures are 550 francs, or \$50, but the student has to pay 100 francs, or \$20, for each examination to which he is admitted; diploma not included.

In *Denmark*: All lectures and exercises in the university of Copenhagen (the only one in Denmark) are gratuitous, neither are fees collected for matriculation and examination. The state bears all except the personal expenses of the student.

In *Sweden*: The lectures and exercises are gratuitous, but fees are collected (a) for matriculation, \$3; (b) for examinations, each between \$2 and \$3.75; (c) for diplomas, 75 cents.

In *Portugal*: The official returns from Portugal fail to state this item.

In *Russia*: Rector Bunge of Kiew University, instituted an inquiry during the year 1872 into the expenses, personal and otherwise, of the students, and found that the minimum expense was 375 roubles per year (or about \$225 at the present value of the rouble, which is much lower than it was in 1872). The details were: Lodging, 80 roubles; dinners, 72 roubles; tea, sugar, and bread for breakfast and luncheon, 48 roubles; clothing, 66 roubles; lecture fees, 40 roubles; books and miscellaneous, 45 roubles; light and washing, 24 roubles. Of the 355 students who replied to the inquiry, 14 lived with their parents and had ample means, 36 were supported with means and victuals from home, and 56 gave private lessons earning from 251 to 300 roubles a year. Forty-three per cent of the students had the benefit of scholarships or were excused from paying for lectures and fees.

It is impossible to give more information under this head with regard to other countries without special or additional inquiries which want of time will not permit.

IV.—PROPORTION OF LAW STUDENTS TO POPULATION.

Prof. J. Conrad, of Halle, Germany, in his "Jahrbücher für National-Oekonomie und Statistik," Dritte, Folge, Erster Band, pp. 376-394, gives the following averages after a careful compilation and a comparative study of statistics, embracing sixty years (1831-'91). He calculates the averages¹ since 1886 to be—

Number of law students in—

Germany	6,004
Austria	5,760
Italy	5,250
France	5,238
Belgium	1,381
Holland	408
Switzerland	295
Denmark	331
Norway	410
Sweden	562
Russia	1,594

Expressed in ratios: In every 100,000 inhabitants there were law students: In Germany, 12.5; Austria, 24.6; Italy, 17.3; France, 14; Belgium, 23; Holland, 9.1; Switzerland, 10.6; Denmark, 14.8; Norway, 20.5; Sweden, 11.9; Russia, 2.

¹Average attendance; the attendance in winter varies from that in summer.

It is interesting to compare these numbers with the numbers of medical students:

Number of medical students in—

Germany	8,663
Austria	5,558
Italy	6,258
France	5,523
Belgium	1,450
Holland	1,203
Switzerland	762
Denmark	452
Norway	397
Sweden	708
Russia	3,155

Expressed in ratios: In every 100,000 inhabitants there were medical students: In Germany, 18; Austria, 20.8; Italy, 20.6; France, 14.4; Belgium, 24.2; Holland, 26.7; Switzerland, 27.2; Denmark, 20.2; Norway, 19.2; Sweden, 15.1; Russia, 3.9.

To complete the survey we attach here also the number of students of the fourth faculty, the philosophical, the graduates of which either enter upon positions as professors in secondary schools or, having studied modern sciences, follow technical pursuits.

Number of students of philosophy in—

Germany	8,225
Austria	1,782
Italy	4,035
France	4,826
Belgium	2,108
Holland	434
Switzerland	501
Denmark	268
Norway	724
Sweden	1,425
Russia	3,312

Expressed in ratios: In every 100,000 inhabitants there were students of philosophy: In Germany, 17.1; Austria, 7.6; Italy, 13.2; France, 12.2; Belgium, 35.1; Holland, 9.6; Switzerland, 17.8; Denmark, 11.9; Norway, 36.2; Sweden, 30.3; Russia, 4.1.

Omitting the students of theology, Prof. Conrad classifies the European countries according to the number of students of the other three faculties as follows:

In every 100,000 inhabitants Belgium has the greatest number of university students, to wit, 82.3; Norway, has 76.6; Sweden, 56.3; Austria, 53.9; Italy, 51.3; Switzerland, 50.4 (50.4 male and 5.2 female); Germany, 48.1; Holland, 45.4; France, 42.6; Russia, 9.9.

In explanation of the phenomenal ratio found in Belgium it must be stated that many restrictions to admission to Belgian universities have been removed, the conditions of admission now being the easiest known anywhere.

The authority quoted above lays particular stress upon the fact that the duration of the course in law is shorter in Prussia than in other countries, to wit, about 7.17 semesters, or 3.58 years; but it must be remembered that the average age of students of law when entering upon their professional or university studies is 20 years, hence that they rarely graduate before their twenty-fourth year of age.

The following comparison is interesting: In Prussia the students of theology study on an average 3.93 years, those of law 3.58 years, those of medicine 6.10 years, those of philosophy 5.30 years. The normal—that is, prescribed—course is, for theology, 3.5 years (12 per cent of the students went beyond it); for law, 3.5 years (7.49 per cent went beyond it); for medicine, 5 years (8.27 per cent went beyond it); for philosophy, 4 years (22.55 per cent went beyond it).

It is to be regretted that other countries do not report these details. Only Sweden and Norway do so. Students of law have to pass an average of 1.38 years in Upsala and 1.52 years in Lund in preliminary or preparatory studies, and 4.08 years in Upsala and 3.33 years in Lund in professional studies, or a total of 5.5 years in Upsala and 4.8 years in Lund. In Norway the students of law are obliged to attend the lectures of the philosophical course for one year (in Belgium two years) before they can begin their law studies, which last 4 years. In Holland the average course of law studies is 4.05 years; in Austria it is required to be 4 years.

At present (1891-92) Austria stands at the head of the list in number of law students. Compare this list:

In every 100,000 inhabitants there are found—

Country.	Law students.	Per cent of all students.
Austria.....	24.6	43.9
Belgium.....	23.0	27.9
Norway.....	20.5	26.7
Italy.....	17.3	53.7
France.....	13.8	32.3
Germany.....	12.5	25.9
Sweden.....	11.9	16.9
Switzerland.....	10.6	19.0
Holland.....	9.1	19.2
Russia.....	2.0	19.8

From this it is seen that in Austria about twice as many university students study law as in Germany, to wit, 43.9 per cent of the total attendance of the three faculties (in 1878 it was 54.4 per cent). No other country comes near this percentage. But if we consider the causes, the fact is easily explained. All who seek a general culture in Austrian universities, and not merely a professional preparation, such as the members of the aristocracy and plutocracy, literary men, and tutors of wealthy boys, etc., attend the law faculty, while in Germany they attend the philosophical faculty.

The following summary may prove useful:

Attendance in European universities, expressed in per cents.

Country.	Year.	Law.	Medicine.	Philosophy.
Germany	1886-87	25.9	37.9	36.2
Austria	1886-87	43.9	42.4	13.6
Italy	1886-87	33.7	40.3	26.0
France	1886-87	32.3	34.0	33.1
Belgium	1886-87	27.9	29.4	42.7
Holland	1886-87	19.9	58.8	21.2
Switzerland	1886-87	19.0	48.4	32.9
Norway	1886-87	26.7	25.9	47.3
Sweden	1886-87	16.9	33.9	47.9
Denmark	1886-87	21.5	43.8	34.8
Russia	1886-87	19.3	35.2	45.0

In connection with this discussion it is well to consider the following statement: Prof. W. Lexis, of Gottingen, has in his recent book¹ undertaken to show the discrepancy between the number of students of law, respectively graduates of law, and the number needed to fill the positions offered by the central government, by provincial and communal authorities, corporations, etc. Altogether, he says, the annual demand for lawyers in the service of justice is 162; in other state and imperial service, 100; in provincial and communal service, 20; as independent attorneys and notaries, 180, and in the service of corporations and in other business positions, 10; together 472, or, to use a round number, 475. Now, supposing that the average time for legal studies in the university is $3\frac{1}{2}$ years, that 25 per cent should be added to the number in demand to include failures in examinations, we have a normal number of 2,080 to meet the annual demand for lawyers in Prussia.

But notice that in 1880-81 the Prussian universities had 3,103; in 1881-82, 3,112; in 1882-83, 2,992; in 1883-84, 2,713; in 1884-85, 2,501; in 1885-86, 2,411; in 1886-87, 2,503; in 1887-88, 2,722; in 1888-89, 2,821; in 1889-90, 2,923; in 1890-91, 3,090.

In 1881-82 the number had reached its maximum, and decreased slowly until the year 1885-86. From that year until 1890 the number again increased rapidly, and nearly reached the maximum of 1881. Now, if the normal number needed to meet the demand is considered, as stated, too low by about 100 or 200, there is still a surplus of many hundreds who will never find remunerative positions as judges or prosecutors, but must wait from 6 to 15 years and work as assistants in courts and administrative offices without any remuneration whatever.

V. ENTERING THE PROFESSION AND GRADES OF LAWYERS.

In England: The consolidated regulations of the several societies of Lincoln's, the Middle Temple, the Inner Temple, and Gray's Inn now in force contain the following rules concerning the mode of entering the profession of law:

¹ "Denkschrift über die Normalzahl der Studirenden."

CALLING TO THE BAR.

RULE 16. Every student shall have attained the age of twenty-one years before being called to the bar.

RULE 17. Every student shall have kept twelve terms before being called to the bar, unless any term or terms shall have been dispensed with, under special circumstances, by the benchers of his inn.

RULE 18. No student shall be called to the bar unless such student shall, to the satisfaction of the council of legal education, have passed a public examination for the purpose of ascertaining his fitness to be called to the bar, and having obtained from the council a certificate of having passed such examination.

CERTIFICATES TO PRACTICE UNDER THE BAR.

RULE 22. No student shall be allowed to take out a certificate to practice under the bar without the special permission of the masters of the bench of the inn of court of which he is a student, to be given by order of such masters; and no such permission shall be granted to any student unless he shall be qualified to be called to the bar, and the regulations as to screening names in the halls, benchers' rooms, and treasurers' or stewards' offices, applicable to students desirous of being called to the bar, shall be applicable to students desirous of practicing under the bar. Such permission shall be granted for one year only from the date thereof, but may be renewed annually.

COUNCIL OF LEGAL EDUCATION.

RULE 23. The council of legal education shall consist of twenty benchers, five to be nominated by each inn of court, of whom four shall be a quorum. The members of the council shall remain in office for two years, and each inn shall have power to fill up any vacancy that may occur in the number of its nominees during that period. To this council shall be intrusted the power and duty of superintending the education and examination of students and of arranging and settling the details of the several measures which may be deemed necessary to be adopted for those purposes or in relation thereto, and such other matters, as are herein in that behalf mentioned.

THE COMMITTEE OF EDUCATION AND EXAMINATION.

RULE 24. A permanent committee of eight members shall be appointed by the council, to be called the committee of education and examination, of whom three shall be a quorum. Two members of such committee, to be selected by the committee, shall go out of office at the end of two years from the 11th of January, 1875, and two members, to be selected in like manner, shall go out at the end of every succeeding two years. No member going out shall be reëligible until he has been at least one year out of office.

RULE 25. The committee shall, subject to the control of the council, superintend and direct the education and examination of students and all matters of detail in respect to such education and examination.

THE EXAMINERS.

RULE 38. The council shall appoint so many examiners, not exceeding six, and so many assistant examiners as may from time to time be necessary, who shall hold office during the pleasure of the council. No examiner shall hold office for more than three years consecutively, nor shall he, after he has held office for that period, be reëligible until he has been at least one year out of office.

RULE 39. In every year after the second two of the examiners to be selected by the council shall retire.

RULE 40. Each examiner shall receive a salary of one hundred and twenty guineas a year, and each assistant examiner a fee not exceeding twenty guineas for each examination.

RULE 41. No member of the council, and no person who is, or within two years has been, a professor appointed by the council, shall be eligible as an examiner.

THE EXAMINATION FOR STUDENTSHIP AND CALL TO THE BAR.

RULE 42. The subjects for examination shall be the following:

(1) Jurisprudence, including international law, public and private; (2) the Roman civil law; (3) constitutional law and legal history; (4) common law; (5) equity; (6) the law of real and personal property; (7) criminal law.

RULE 43. No student shall receive from the council the certificate of fitness for call to the bar required by the four terms of court unless he shall have passed a satisfactory examination in the following subjects, viz: (1) Roman civil law; (2) the law of real and personal property; (3) common law, and (4) equity.

RULE 44. No student shall be examined for call to the bar until he shall have kept nine terms; but students shall have the option of passing the examination in Roman civil law, required by Rule 43, at any time after having kept four terms.

RULE 45. The council may accept as an equivalent for the examination in any of the subjects mentioned in Rule 43, other than common law and equity—

1. A degree granted by any university within the British dominions for which the qualifying examination was in law;

2. A certificate that any student has passed any such examination, though he may not have taken the degree for which such examination qualified him; and

3. The testamur of the public examiners for the degree of civil law at Oxford that the student has passed the necessary examination for the degree of bachelor of civil law;

Provided the council is satisfied that the student, before he obtained his degree, or obtained such certificate or testamur, passed a sufficient examination in such subject or subjects.

RULE 46. There shall be four examinations in every year, one of which shall be held in sufficient time before each term to enable the requisite certificates to be granted by the council before the first day of such term. The days of examination shall be fixed by the committee, and at two of such examinations, viz, at those to be held next before Hilary and Trinity terms, there shall be an examination for studentships.

RULE 47. As an encouragement to students to study jurisprudence and Roman civil law, twelve studentships of 100 guineas each shall be established, and divided equally into two classes, one class of such studentships to continue for two years, and to be open for competition to any student as to whom not more than four terms shall have elapsed since he kept his first term, and another class to continue for one year only and to be open for competition to any student not then already entitled to a studentship, as to whom not less than four and not more than eight terms shall have elapsed since he kept his first term; two of each class of studentships to be awarded by the council on the recommendation of the committee, after every examination, before Hilary and Trinity terms, respectively, to the two students of each set of competitors who shall have passed the best examination in both jurisprudence and Roman civil law. But the committee shall not be obliged to recommend any studentship to be awarded if the result of the examination be such as, in their opinion, not to justify such recommendation. Where any candidates appear to be equal, or nearly equal, in merit, the council may, if they think fit, divide the studentship between them equally, or in such proportions as they consider just. Where in any year a studentship in either class is not awarded by reason of the candidates not appearing to deserve it, the council may, if they think fit, appropriate it or a portion of it for that year to the other class, or may offer it for competition in some other subject.

RULE 48. Each inn of court shall bear the expense of the studentships awarded to its own students.

RULE 49. The examiners shall submit their examination papers to the committee for approval at such time as the committee shall direct; and the number of marks to be attributed to each paper shall also be submitted to the committee for approval.

RULE 50. Previous to each examination the committee shall give such notice as they shall think fit of the books and branches of subjects in which students will be required to pass at such examination in order to be entitled to a certificate under Rule 43.

RULE 51. The examinations shall be partly in writing and partly *viva voce*.

RULE 52. One examiner at least shall be present during the whole time of the examination in writing.

RULE 53. The board of examiners shall, after each examination, report the result thereof to the committee, who shall submit to the council the names of those students, if any, who are, in their opinion, entitled to receive certificates under Rule 43, or to obtain studentships.

RULE 54. At every call to the bar those students who have obtained studentships shall take rank in seniority over all other students who shall be called on the same day.

RULE 55. All students shall be bound by variations as may from time to time be made in these regulations.

In France: Here, as everywhere on the continent of Europe, the profession of law is entered through the common vestibule of all the four professions—the university; but less time is spent in theoretical study than in Germany. Two grades of lawyers are found in France—“*avoué*” and “*avocat*.” The *avoué* is a very inferior kind of legal functionary who is not permitted to plead, and usually acts in subaltern positions or in small villages without courts of justice, but may prepare briefs. He holds a “certificate of capacity,” obtained, after two years’ study of law, by passing an examination conducted by the faculty under supervision of the State. The university grants a degree of “bachelor of law” when an examination for that purpose is passed. After three years of study in law a “diploma of licentiate of law” is granted after a rigid examination. This degree admits to the profession. If a student takes up an additional course and spends another (the fourth) year in the study of law, he may acquire the degree of “doctor of law.” Though this degree is not required for the practice of law, it is most desirable for ambitious young men who expect to enter positions in the higher service of the state. The position of a French notary is not easily defined. He seems to be a combination of a banker, a justice of the peace, a real-estate agent, a conveyancer, an official copyist, and family friend.

In Germany: A law student who passes his first or graduation examination, after three and a half years’ study in the university (it is immaterial whether he acquires a degree or not, the degree being merely an academic honor) is thereby entitled to enter the “service of practical preparation,” his work in the university being considered theoretical preparation. This service in the practice of law lasts three years and is required of all lawyers, whether intending to enter the public service or not. Of this period one year is spent in the service of public administration, either governmental, provincial, or communal, one year and a half in subordinate service in lower courts, and half a year in the office of a lawyer who is admitted to the higher courts.

This three years’ practical unremunerative service is required of all legal students; that is, of private practitioners and of all who intend to become judges, prosecutors, or attorneys, and also of all who intend to

enter the higher administrative and finance service. At the expiration of three years' practical preparation a second examination in law is to be passed (neither after nor before the expiration of that time) by all who wish to enter the public service. This second examination, which is entirely in writing, embraces common civil law, commercial law, exchange, bankruptcy law, civil procedure, criminal law and procedure, state and administrative law, ecclesiastical law, police law, political economy, and science of finance. This examination is a requisite for the appointment as judge, notary, clerk of court, practice of attorney in higher courts, or the appointment to higher administrative office. Applicants for a position as notary must spend two years in practical work in a notary's office. Attorneys when having passed the second examination are eligible for judgeships.

The entire institution of legal studies and professional preparation is regulated by the governments of the various states which constitute the Empire. One distinction is to be made, however. The second examination referred to, which opens the way to remunerative service, is not dependent upon any academic degree acquired. The degree of "doctor juris" is conferred in the university by the faculty alone; private institutions for legal studies *non est*. Compare subsequent statements concerning Austria and Norway; also preceding statement concerning France.

The foregoing statements have reference to the conditions existing in all the German states. In Prussia the law students who have passed their first examination and spent three years in practical preparation are called "Referendars." After they have passed their second examination and entered the state service they are called "Assessors," but act without pay as clerks of court, assistant prosecutors, and assistant judges. It may be six, eight, or ten years before they receive a definite appointment. Not until that is made can the young lawyer expect any remuneration.

A distinction between attorneys and barristers is not made in Germany. The functions of lawyers are essentially the same as in America.

In Austria: Admission to the practice of law, provided it is in relation to the public service, is dependent upon a certain number of years of study in a university law faculty or in a faculty of science and organization of government. The close of this period is marked by passing three theoretical state examinations, to wit: In history of law, jurisprudence, and science of government.

Students who do not intend to enter the public service, nor aspire for a degree, are still subject to the rules of study, according to which no lawyer is admitted to practice unless he can prove to have attended the law faculty for four years and has a diploma of graduation. The above-mentioned examination in history of law takes place at the close of the second year of study, and all law students, whether preparing for the public service or not, are subject to it.

The subjects embraced by the examination in history of law are (1) Roman law; (2) ecclesiastical law; (3) German law; (4) history of Austria (of the formation of the Empire and the development of public law).

The subjects embraced by the examination in jurisprudence and science of government are (1) Austrian private law; (2) Austrian commercial law and law of exchange; (3) Austrian civil procedure; (4) Austrian civil law and procedure; (5) Austrian constitutional law; (6) Austrian administrative law; (7) political economy and industrial policy; (8) science of finance, with special regard to Austrian finance legislation.

An application to this second examination is not permissible unless the student has successfully passed the first examination.

All students of law are obliged to attend one lecture course in mental philosophy previous to the first examination, and a course of lectures on philosophy of law and comparative statistics after having passed the first examination.

Formerly the degree of doctor juris made the bearer eligible to positions in the public service, but the law of 1891 relegates the degree to a mere academic honor and prescribes the aforementioned examination for doctors juris also.

Distinctions in regard to grades of lawyers, such as solicitor and attorney, or *avoué* and *avocat*, are not made in Austria.

In Italy: The state exercises supervision over the professional preparation of lawyers through the university, rectors and professors as the state's representatives with regard to the quantity of matter to be learned (see course of study), just as it does with reference to the medical students. The university authorities, in their capacity of servants of the state, control the conferring of academic degrees which are essential for the purpose of entering the profession. The official returns say but little on the subject of examinations outside of examinations for degrees, but we gather enough from them to state that the graduates of the law faculties must submit to a state examination in order to be able to enter the public service. This service may be in the executive or judicial branches of the Government. This provision is set aside only where particular technical knowledge or rare skill in some specialty is required. Women are admitted to the study of law and to the degrees, but are prohibited from the practice of law.

A distinction in the grades of lawyers is made between "attorneys," "procurators," and "notaries." Attorneys or "*avocati*" must pass an examination to be admitted to higher courts; procurators do not plead in higher courts.

In Belgium: The official returns state that it is necessary for the student, for the purpose of entering the profession as attorney, to have passed through the university and have acquired the degree of doctor of law. Moreover, his name must be inscribed on the official list of

attorneys in a court of justice, which can not be done without evidence of attendance at the university, such as is prescribed, certified to by the faculty. Hence the graduate's admission to the bar is solely dependent upon his professional preparation in the university. Women are not prohibited from acquiring the academic degree; but that degree does not admit them to the practice of law.

To become a justice of peace it is not necessary to have the degree of doctor of law. This degree is, however, requisite for positions of judges of courts "of the first instance" and higher courts and other offices in the judiciary branch of the government.

In the Netherlands: The same conditions prevail which are found in Belgium, except that a special state examination must be passed after two years' practical work subsequent to graduation from the university.

In Norway: When a law student has completed his studies in the university he presents himself at one of the law examinations held by the faculty. These examinations take place twice a year, and at each eleven subjects (ten theoretical and one practical) are submitted to be worked out in writing within three, five, or ten hours, according to the nature of the subject (the whole under surveillance). This is followed by a severe oral examination. If the examination is passed the degree "candidatus juris" is conferred upon him. A subsequent examination is required for the degree of "doctor juris." Passing these examinations gives access to the most important offices in the legal profession, particularly the judgeships, which are always filled by appointment, never by popular election. Attorneys and barristers are also appointed in the supreme court. The state recognizes no lawyer who has not acquired his professional education in the universities, but most young lawyers serve as assistants in a lawyer's office for the purpose of gaining practical experience. This apprenticeship is passed partly during the four years of university study or after having acquired a degree.

In Denmark: Essentially the same conditions are found that prevail in Norway. According to a regulation of September 26, 1890, the requirements of the state examination for the grade of advocate (or lawyer) are less stringent than formerly; but they still prescribe a full course of law studies in the university. Judges of higher courts must be doctors of law.

In Sweden: The distinction between attorneys and barristers ("advocate" and "avoué") does not exist. For the purpose of pleading in court it is necessary to have attended a university, but not to have obtained a degree as in Norway, or a "certificate" as in France, but the state guards its offices, both in the administrative and judiciary branches, by requiring the candidates to pass state examinations, particulars of which are not at hand.

In Portugal: The degree of bachelor of law obtained in the Uni-

versity Coimbra (the only university in Portugal) admits to the practice of law. No distinctions are made in the grades of lawyers. In the competition for higher positions in the royal public service the holders of the degree have the preference.

In Hungary: The candidate of law must give proof of having attended the law course in one of the three universities, or in any of the law academies of Hungary (or Austria), and have passed (*a*) the graduation examination, (*b*) the state examination, from which he is excused in case he has acquired the degree of doctor of law. This degree admits to the profession, hence the degree is not a mere academic honor. Only those who enter the public service are subjected to a state examination. The graduation examination, which entitles to a certificate of capacity, must be passed before the candidate is admitted to the degree examination. After having gone through the theoretical work of the university the candidate is called "aspirant advocat" and must pass three years in a lower court and in the office of a lawyer of good standing before he is recognized by the authorities as a lawyer. During this time his name is recorded on the roll of lawyers in the "chamber of lawyers," and he performs minor duties which initiate him into the routine of legal work. There is only one grade of lawyers in Hungary. Notaries must have spent their three years' practical work in a notary's office. Women may study law in the universities, but they are debarred from the legal profession.

From Russia no information concerning the requirements for admission to the profession (other than is found in the syllabus on pp. 118-125) is available.

VI. SOURCES OF JURISPRUDENCE IN EUROPEAN COUNTRIES.

The remarks under this head are inserted as an introduction to the courses of study in law for the purpose of enabling the reader to see why certain subjects are treated more fully in Europe than would seem justified in this country; and, again, why others are treated lightly upon which our law schools bestow much attention and great care.

Roman law is the most prolific source of jurisprudence in Europe. It saturates both the science of law and the everyday practice of the common people. In all the many countries that were once subject to Roman rule, Roman customs and laws remained, to a certain limited extent, the basis of legal practice long after the fall of the Western Empire. But in Germanic countries (Germany, England, and the three northern countries) Germanic custom and tribal laws predominated until, in the twelfth century, through the efforts of the University of Bologna, then a famous law school and still one of the foremost seats of learning of Italy, Roman law was introduced as a science in Germanic countries. After the revival of letters, and subsequently during the sixteenth, seventeenth, and eighteenth centuries, the sci-

ence of Roman law was superinduced, as it were, into the modern science of law. The discovery of Gaius's Commentaries (in 1816) has had no small share in the esteem in which Roman law is held at present in Europe.

England occupies an exceptional position in regard to law. The oldest law there is based upon Anglo-Saxon laws (sixth to eleventh centuries). Later, Norman rule brought Norman customs and laws, slightly tainted with Roman law, through French channels. In its further development law in Great Britain remained custom law (common law), the law consisting of judges' decisions or precedents. Roman law also found an introduction into England especially through Vacarius, who had studied in Bologna, but it never attained the importance it found in countries of the former Roman Empire.

All the continental countries had been more or less subjected to the sway of the Roman Empire for centuries, while in England the Romans did not leave a deep impress upon laws and customs of the people. When in continental Europe, after a period of great unrest and chaos (during the great migration that lasted nearly 200 years), the former Roman "municipia" or cities formed the nuclei of law and order, it was but natural that the basis of their newly-constructed jurisprudence should be the well-known Roman law, especially since it had been codified more systematically than any other law.

The Teutonic or Germanic tribes (the Franks in France, the Longobards or Lombards, Vandals, and Goths in Italy and Spain, the Saxons in England, and a host of others in Germany and the northern peninsulas) had their ancient tribal customs which gradually developed, during succeeding centuries, into native custom law, of which the feudal law¹ was the most important. It was often difficult to harmonize feudal law that reigned supreme in the castles and possessions of chiefs, lords, and petty princes, with Roman law, modified and adapted to existing circumstances in the cities (the so-called free cities), hence the frequent contests between princes and cities.

When the Church of Rome came to be recognized as the successor of Imperial Rome, its law, that is, the canonical or ecclesiastical law assumed importance over all of Europe, except in Russia, which, during the middle ages, was not considered part of Europe. This law referred chiefly to marriage and parental relations, church property, etc. In Russia the canonical law of the Greek Church was adopted later.

Side by side with the ancient custom law, feudal law, Roman law, and canonical law, another source of jurisprudence became prominent as monarchism developed strength, *i. e.*, the laws of princes. In France, for instance, the ordinances of the Merovingians, Carolingians, Capets, Valois, and Bourbons became national laws when all the provincial

¹ Law of knight-service. The "nervus rerum," money or its equivalent, has always been the most prolific source of litigation, hence the feudal law relating to possessions in land and servitude formed the greater part of the law practice.

parliaments adopted them. In Germany some tribal laws had been codified soon after the great migration (500-600 A. D.). They referred to certain important points of law, for instance, the Salian law (regulating the succession of princes).

Hence we see several sources of jurisprudence in continental Europe: Custom law, Roman law, feudal law, canonical law, and law of princes. From all of these arose (when the nations began to centralize) in each country a national law, peculiar to itself, *i. e.*, a French, a German, an Italian, a Spanish, etc., law. These laws were in a few instances codified (as for instance in 1328 and 1375 the "Saxon and Suabian Mirrors" in Germany, in 1550 the "Carolina" or criminal code of Charles V), but in most cases they remained uncollected until the eighteenth and nineteenth centuries. France, after the year 1789, began the codification (Napoleon's Five Codes of "Droit Français"). During the middle ages southern or Roman France followed Roman law (the written law) while northern or Frankish France followed custom law. But Roman law became predominant during the sixteenth century, and France was temporarily the acknowledged center for the study of Roman law, especially the university of Montpellier.

The early centralization of France made a unification of legal customs possible, while in disjointed Germany such an effort has not succeeded to the present day. Germany at present enjoys uniform codes of commercial and criminal law, but has no uniform code of civil law as yet. Each petty state has its own code of civil law. The same holds good for Italy where a uniform criminal code was not adopted until 1890. In Spain and Italy canonical law assumed more importance than in France, Germany, and England. In the northern countries the national custom laws are more distinct than on the continent, and show greater deviation from the Roman law, while ecclesiastical law has lost its significance since the time of the church reformation (1525). Scandinavian laws were codified very early, during the twelfth and thirteenth centuries.

In England the established church claimed and still claims attention of the legal profession through its legal and political prerogatives, hence canonical law is still a subject of study in England, while in America it never had any significance. The common law, this peculiar English growth (custom law), has its strongest roots in the struggle and fusion of the various nationalities that make up the present population, the Celts, Anglo-Saxons, Danes, and Normans. One wave of conquerors after another pressed upon those in possession of the land, and in the struggle resulting therefrom a limit was found beyond which the conquerors could not proceed without injury to themselves. The limit was not always uniform owing to the different amount of opposition the aggressors found, and in absence of uniform codes the decisions of courts of various stages and ages were quoted and applied in analogous cases. Hence it is truly said "that in England and America

the study of law concerns itself chiefly with what has been and what is law, while on the continent of Europe they study what law ought to be."—David Dudley Field. When Roman law became more and more the recognized standard in continental Europe, English lawyers directed their attention to it also, and at present it is studied carefully in English law schools. (See Appendix I.)

The feudal law, the law of knight-service (*Lehusrecht*), has disappeared in Europe. A few legal customs (law of succession in England), some technical terms in modern codes (right of fief, etc.), and rare allusions to conditions during the middle ages remind us of its former existence, but it has lost all influence upon the formation of national laws.

We group in tabulated form the sources of jurisprudence according to their respective importance as follows:

England.—(1) English common law; (2) Roman law; (3) ecclesiastical law.

France.—(1) Roman law; (2) provincial and national laws, resulting in code Napoleon and present national codes; (3) ecclesiastical law.

Germany.—(1) Roman law; (2) Ecclesiastical law; (3) Provincial and national law.

Austria.—(1) Roman law; (2) Ecclesiastical law; (3) Provincial and national law.

Spain.—(1) Ecclesiastical law; (2) Roman law; (3) National law.

Italy.—(1) Roman law; (2) Ecclesiastical law; (3) Provincial and national law.

Switzerland.—(1) Roman law; (2) Provincial and cantonal law; (3) Federal law.

Belgium.—Follows the example of France.

Holland.—Follows to a great extent the example of Germany.

Denmark, Norway, Sweden.—(1) National law; (2) Roman law.

Russia.—(1) Imperial law; (2) Ecclesiastical law (Greek Church); (3) Roman law.

The foregoing may explain to some extent the courses of study offered in subsequent pages, though the exposé makes no claims to anything like an authoritative statement.

We summarize the exposition of the Reception of Roman Law in Germany from Dernburg's "*Pandektenrecht*:"—The reception of Roman Law in Germany as authoritative occurred in a comprehensive way after the middle of the fifteenth and in the beginning of the sixteenth centuries. It was then completed with an almost elemental power, although there was not lacking a decided opposition to it. The entire secret of this movement cannot be fully known, but certain important causes are indisputable.

(1) One was a natural desire for legal uniformity, which had become necessary for commercial intercourse. The local German laws were too numerous and too divergent. (2) It was an old tradition that the

corpus juris civilis was the imperial law of Germany, the German emperors being regarded as the successors of the Cæsars. (3) The various influences of Renaissance were forever making for the same end. Hence the jurists, and all those in authority worked together to effect the acceptance of Roman law. (4) The universities taught only Roman and Canonical law. (5) The unlearned village justices who had expounded the old traditional and customary law were not equal to the changed conditions. (6) The imperial authorities gave legal recognition to Roman law and encouraged its application.

So far as the degree or measure of the reception is concerned it may be said, that only that part of Roman law was accepted which did not contradict established German customs, and only what was found to be applicable to German conditions. In a narrower sense this embraced only those principles of the *corpus juris* which the glossarists, *i. e.* the Bologna School, had supplied with commentaries. The maxim was: *Quidquid non agnoscit glossa, nec agnoscit forum.*

VII. LAW COURSES IN EUROPEAN UNIVERSITIES.

It is difficult to give equivalents in English for many of the terms used in the following pages, because in foreign countries that have different systems of law a different terminology is used in connection with legal education. This makes it impossible to give accurate equivalents, though the terms may convey to lawyers a meaning that would not be grasped by the general reader.

I.—ENGLAND.

HONOR SCHOOL OF JURISPRUDENCE IN OXFORD.

I.—General regulations.

1. The examination in the school of jurisprudence includes: (1) General jurisprudence; (2) The history of English law; (3) Such departments of Roman law, and (if the board of studies shall think fit) such departments of English law as may be specified from time to time by the board; (4) International law, or some department of it specified by the board of studies. This may be omitted by candidates who do not aim at a place in the first or second class.

2. The board of studies may include in the examination, either as necessary or as optional, other subjects which they may deem suitable to be studied in connection with jurisprudence; and may, if they shall judge it advisable, require that candidates who have not been classed in any other school shall take in additional books or subjects, or produce evidence of having been previously examined in such additional books or subjects. The board may prescribe books or portions of books in any language.

3. Subject to such regulations as the board may make from time to time select portions of historical study, approved by the board of historical studies, may be substituted by candidates for portions of legal study, provided that no candidate shall be allowed to offer in the school of jurisprudence any select portion, whether of legal or historical study, which he has already offered in the school of modern history.

II.—*Regulations of the board of studies.*

The following subjects of examination are specified by the board, but candidates are informed that with the exception of the Institutes of Gaius and the Institutes of Justinian and the specified acts of Parliament, none of the matter of the examination is required to be studied textually. The other authorities mentioned in the notice are intended to define, to some extent, the nature of the several topics of the examination, and to indicate the sources from which information upon each can be most conveniently obtained.

1. *General jurisprudence.*

Candidates will be examined in the principles of jurisprudence, in the theory of legislation, and in the early history of legal institutions, with special reference to Austin's lectures, Bentham's principles of morals and legislation, and his theory of legislation, by Dumont, and the works of Sir Henry Maine.

They may also refer to Hobbes's *Leviathan*, Books I and II, and to Savigny's "*System des heutigen römischen Rechts*," Vol. I.

2. *History of English law.*

(a) *History of constitutional law.*—Candidates will be expected to have mastered the leading principles of existing constitutional law, and in particular a knowledge of the following topics: The legislative power of Parliament, the modes in which it is exercised, and its extent as to territory and persons; the prerogatives of the Crown, the privileges of the Houses of Parliament; the constitutional position of the privy council, the ministers of the Crown, the established church, the courts of law, and the armed forces.

They must possess such an acquaintance with the history of the above as is necessary to explain their present character and working. They are recommended to refer to the constitutional portions of Blackstone's or Stephen's Commentaries, Dr. Stubb's *Documents Illustrative of English History*, and his *Constitutional History* (omitting those chapters which relate more especially to political history), Hallam's *Constitutional History*, Sir T. E. May's *Constitutional History*, and Bagehot's *English Constitution*, and are required to read carefully the following statutes: Constitution of Clarendon, *Magna Charta*, Statute of Westminster, II, 13 Ed.; I, Stat. 1, c. 24; Petition of Right; Habeas Corpus, Act 31, Car. II, c. 2; Bill of Rights, 1 W. and M., Sess. 2, 2; Act of Settlement, 12 and 13, Will. III, c. 2.

(b) *History of the law of real property.*—This subject is to be studied in Blackstone's Commentaries, Book II, or Stephen's Commentaries, Vol. I, Book II, Part 1, and Mr. Digby's *Introduction to the History of the Law of Real Property*. The principal statutes referred to in the latter book should be mastered, and reference may with advantage be made to Mr. Williams's *Treatise on the Law of Real Property*.

3. *Roman law.*

The Institutes of Gaius.

The Institutes of the Emperor Justinian.

Candidates are expected to be acquainted with the history of Roman legislation and Roman judicial institutions.

4. *English law.*

The principles of the law of contracts.

5. *International law.*

(a) The outlines of international law as a system.

(b) The history of the law relating to seas, ships, and navigable rivers in time of peace.

Students are recommended to read Woolsey's Introduction and Heffter's "Europäisches Völkerrecht" (in German or French), referring also to Wheaton's Elements, or to the Law of Nations by Sir Travers Twiss. Upon subject (b) they may consult Ortolan, *Diplomatie de la Mer*, livre deuxième. (See Students' Handbook to the University of Oxford.)

(The principal changes of the course since 1887 are the division of the examination into two parts, the more searching treatment of Roman and English law by an increased number and more definite assignment of papers, and the fuller recognition of original thought and literary power, in the addition of a second essay paper besides that already devoted to essays and problems. Moreover, general jurisprudence as a whole, and English constitutional law and history as a whole, will henceforth be standing subjects for the students of every year; their previous treatment in variable portions not having been considered satisfactory.) (See E. C. Clark's Cambridge Legal Studies.)

SUBJECTS TAUGHT IN CAMBRIDGE UNIVERSITY IN 1892-93.

Digest (Locati Conducti). History and general principles of Roman laws, principles of international law, history of English law, twelfth and thirteenth centuries, introduction and tenure, status and jurisdiction. Equity, more especially trusts. Criminal law (substantive), criminal procedure and evidence, jurisprudence, personal property. International law continued—contract, statute of frauds, institutes of Gaius and Justinian. History of Roman law continued—real property, Roman law (text and revision). International law (introduction and peace, war and neutrality). Law of contract—advanced real property. Law of torts, sale of goods, law of real property. Ecclesiastical law, constitutional law, criminal law, medical jurisprudence for students of criminal law. (See Cambridge University Reporter, May, 1892.)

BOOKS USED BY LAW STUDENTS IN CAMBRIDGE.

Jurisprudence.—Blackstone's Commentaries, Introduction, secs. 2, 3, and the general part in the first chapters of each book; Austin's Jurisprudence; Markby's Elements of Law; Clark's Practical Jurisprudence; Clark's Analysis of Criminal Liability; Holland's Jurisprudence; Maine's Ancient Law; Village Communities; Early History of Institutions, and Early Law and Custom; Savigny's System des heutigen römischen Rechts. See the French translation by Guénoux and the English translations of vol. 1, 2, and 8, by Holloway, Rattigan, and Guthrie.

Roman law.—Parallel texts of Gaius and Justinian; Gneist's Institutionum et Regularum Juris Romani Syntagma; Gaius, edited by Abdy and Walker, Poste, or Muirhead; Justinian's Institutes, edited by Abdy and Walker or Moyle. Muirhead's Historical Introduction to the Private Law of Rome—on Roman Law generally. Roby's Introduction to the Study of the Digest, Mackelvey's Systema Juris Romani; Hunter's Roman Law, or Salkowski's Roman Private Law; Gibbons's Decline and Fall of the Roman Empire, chap. 44. As a lexicon, Dirksen's Manuale Juris Civilis.

International law.—Hall's International Law; Wheaton's Elements of International Law; Calvo's Le droit international théorique et pratique; Wheaton's History of International Law; Maine's Lectures on International Law; Pitt Cobbett's Leading Cases on International Law; von Holtzendorff's Handbuch des Völkerrechts.

English law.—*Real property*: Williams's Law of Real Property or Edward's Compendium of the Law of Property in Land; Digby's History of the Law of Real Property; Challis's Law of Real Property. *Personal property*: Williams's Law of Personal Property.

English law.—*Contract*: Anson's Law of Contract or Pollock's Principles of Contract. *Torts*. Pollock's Law of Torts; Bigelow's Elements of the Law of Torts.

English law.—*Criminal law*: Stephen's Commentaries, book VI (vol. IV); Stephen's Digest of the Criminal Law; Stephen's Digest of the Law of Evidence; Stephen's

History of Criminal Law. *Constitutional law and history*: Anson's Law and Custom of the Constitution (vols. I and II); Dicey's Law of the Constitution; Hearn's Government of England; Stubb's Constitutional History; Hallam's Constitutional History; May's Constitutional History; Taswell-Langmead's English Constitutional History.

General text-books.—Stephen's Commentaries on the Laws of England; Holmes's Lectures on the Common Law; Selection of Cases; Smith's Leading Cases on the Common Law; Tudor's Leading Cases on the Law of Real Property; Finch's Select Cases on the Law of Contract; Ball's Select Cases on the Law of Torts; Thomas's Select Cases on Constitutional Law. (See Cambridge University Reporter, June, 1892.)

II.—FRANCE

The most minute courses of study found among the sources of information at the disposal of the public in the National Bureau of Education are the French. We quote the entire course published in the Annual Catalogue of the Université de France, Académie de Montpellier, one of the most renowned law schools of France. It is almost identical with that of Paris and other French faculties.

It begins with the words: "The course is framed in conformity with the prescribed regulations." The work is divided into four groups for four years.

FIRST YEAR.

Civil law, Roman law, political economy, history of French law, and constitutional law.

History of French law, elements of constitutional law, and the organization of public powers.

FIRST PART.—*General history of French law, public and private. (Syllabus.)*

Definition of ideas and terms.—Of law and history of law in general. The history of French Law.

1. THE ORIGIN.

(1) *Gaul before the Roman conquest.*—Primitive population of Gaul: Iberes, Ligures, Celts, or Gauls, their government and their social status. Influence of Celtic law conjectured.

(2) *Roman Gaul.*—Character and consequence of the Roman conquest. Sec. 1. Roman administration, administrative organization, municipal government, taxes, military organization, civil and criminal legislation. Condition of persons: Origin and development of "colonat."

(3) *Teutonic invasions.*—Sec. 1. The Teutons and their institutions before the invasions. Sec. 2. The nature of Teutonic establishments in Gaul. To what degree the Gaulic Romans preserved their liberty, property, and institutions. Principles of personality of laws. Sec. 3. Fusions of Roman institutions, and Teutonic customs. The institutions of the Frankish monarchy. Political and judicial organization. Criminal law and criminal procedure. Condition of persons and lands. Sources: Law of the barbarians, law of the Romans, the statutes of Charlemagne, monuments of practice.

(4) *The Christian Church.*—Its relation with the State; the church's inner constitution and the state's organization; sources of canonic law; apostolic constitutions and the canons of the apostles; the law collection of Denys the Little; the Isidorian collection, false decrees.

2. FEUDALISM.

Causes and general character of the feudal system:

(1) *Special organization of landed property.*—Fiefs: forms and character of a fief-contract; its effects and sanction; limitations of the law of transmission; tenure of plebeians; the manor; tenure of serfs; free lands; freeholds; condition of persons; nobility, chivalry, plebeians, serfs, their condition; servile communities; how persons became serfs and ceased to be serfs.

(2) *Hierarchical organization of fiefs and fief-possessors.*—Classification of fiefs. History of their establishment.

(3) *Division of sovereignty and its fusion with property.*—Legislative power in feudal society. Right of war and feudal armies. Administration of justice. Taxes.

(4) *The Church in feudal society.*—Ecclesiastical lords. Legal condition of Church lands. Distribution of ecclesiastical patrimony among the members of the clergy. Ecclesiastical jurisdiction.

(5) *Origin of feudalism.* Analogous institutions in Gaul, in Germany, and the Roman Empire. Royal vassalage and its benefits. Arriere vassalage and arriere benefits. Seniority. The succession of public functions. Immunities. Sources of feudal and canonical law.

3. MONARCHY.

1. TEMPORARY MONARCHY.

Re-establishment of central power.—(1) *The communal movement.*—The most ancient institutions which the enfranchised town sought to strengthen: Roman municipal government, sheriffalty, the “peace of God,” German trade guilds. Principal forms of municipal organization: Sworn communes, consulat-towns, provost-precincts. Lorris’ charter.

(2) *Contest between royalty and feudalism.*—Re-establishment of the territorial union of France; conferring the right to a province reserved by the crown; inalienability of royal domains; revival of royal attributes; roll of civilians. Re-establishment of legislative powers, judiciary powers, military powers, fiscal powers.

(3) *Contest between royalty and the church, especially the papacy.*—Boniface VIII, the council at Basle; the pragmatic sanction of Charles VII. *Contest between royalty and the French church.* Limitations of ecclesiastical jurisdiction; participation of the church in fiscal charges.

(4) *Organization of a temporary monarchy.*—Rules for transmission of royal power; parliaments; venality of officers; discrete justice. Organization of administrative central power; ditto military power; ditto fiscal power. Legislative power. The “Etats generaux” (diets). Administration of provinces and local liberties.

(5) *Development of private law during this period.*—(1) Renovation of Roman law; its influence upon public and private law. (2) Formation of custom law; distinction between the land of custom law and land of written law. Monuments of customlaw. French monuments; a friend’s counsel, the great commoner of Normandy; establishments of Louis the Sainted, customs of Beauvois by Dumanoir; monuments of the fourteenth century; official compilation and correction of common laws. Lawyers of the sixteenth century; Dumoulin, Guy Coquille, Loysel, etc.

2. ABSOLUTE MONARCHY.

Doctrine of Divine Law and Absolute Power.—(1) *Disappearance of public liberties.*—National liberties: The rôle parliaments played; their suppression; superior councils. Local liberties: Provincial assemblies and the communes at the close of the “ancien régime” (time previous to the great revolution 1789).

(2) *Submission of ecclesiastical power.*—“Concordat” of 1515; “Edict of small dates;” Declaration of 1682. Limitation of the right to acquire. Dissenting denominations. The Protestants before and after the revocation of the “Edict of Nantes.” Edict of 1788. The Jews.

(3) *Political Organizations.*—Administration, comptrollers, councils, justice, army, taxes.

(4) *Social Organization.*—Condition of persons: Nobility, plebeians, peasants. Condition of lands: Lease and ground rent; 99 years’ rent. Eminent domain of the lord and lordly rights. Economical situation concerning money; Loans at interest

and contributing rents; concerning commerce and industry; corporations; mastership and trades' wardenship. The Edict of 1776.

Sources of law during this period.—The great ordinances of the sixteenth, seventeenth, and eighteenth centuries. The great lawyers of the period.

3. DEMOCRATIC EQUALITY.

The movement of the great minds of the eighteenth century: Montesquieu, Voltaire, Rousseau. New principles introduced into legislation.

Private Right.—Abolition of the feudal system and transmission of landed property. Law covering the state of persons: Marriage, family, succession. Civil Code. *Reform of Criminal Law.*

Public Law.—Advent of constitutional law.

SECOND PART.—*Elements of Constitutional Law and Organization of Public Powers*—

(1) *Philosophy of constitutional law.*—General ideas concerning the character of constitutions. The utility of written constitutions. Who makes a constitution? Sovereignty of the people; its limits. How does it exert its sovereignty? Representative government. Theory of the right of suffrage, universal or restrained. Representation of minorities. Constitutional guarantees. Declaration of rights. The necessary liberties. Independence and separation of powers.

(2) *History of constitutional law.*—Would France have a constitution if it had not been for the "Ancien Régime?" Study of the successive constitutions since 1791. To what degree each contributed to the overthrow of the government that applied or violated it.

(3) *The present constitution.*—Origin of the constitution of 1875. Its spirit and essential features. To what category of constitutions does it belong? The revisions to which it has been subjected. Organization of public powers. Functions of the legislative and executive branches. Reciprocal influence of these powers upon each other. Conflict of power. Revision of the constitution. Constitutional practice and the constitution of 1875.

4. POLITICAL ECONOMY.

Definitions: Production of wealth, exchange, credit, property, wages, public finances.

"Consumption" of wealth, end and aim of the entire economical mechanism. Psychological analysis of the needs and desires of man. Philosophical doctrines concerning the place which man owes to his needs and desires. The rôle currency plays and the many modifications it causes in consumption. The use of money: Expenses, savings, investments. Savings: Do they constitute work meriting wages? Expenses of luxury: Is the lavish use of money beneficial to industry? Investments: Is this form of the use of money also a form of consumption? Institutions designed to reduce expenses: coöperative societies, kitchens, etc. Institutions designed to induce savings: savings banks, etc. Institutions designed to facilitate investments; Building associations, loan emissions (State bonds). Comparative consumption of various classes of society. Of the influence consumption exercises upon public health. Falsification and adulteration of articles of consumption. Intervention of the State in matters of consumption. Municipal laboratories, etc. Public consumption, is it different from private? The future of human society looked at from the point of view of wealth-consumption.

ROMAN LAW.

This subject should not be taught longer than one and one-half years. It is not possible for the professor during the first year, though it may be an annual course, to explain purely and simply the first two books of Justinian. The professor of Roman law for the second year, the course of which is semi-annual, will have no

more time than is sufficient to explain the other two books. Sources of Roman law, fundamental ideas, condition of persons, family law, theory of patrimony, 25 lectures.

Patrimony, property, real estate, 25 lectures; obligations and contracts, 40 lessons.

Private law; transmission of property; succession, legacies, trusts; procedure and actions.

SECOND YEAR.

Civil law, Roman law, public international law, criminal law, administrative law.

(a) *Roman law*.—Study of obligations.

(b) *Public international law*.—Introduction; definitions; its foundation; of the idea of law in the relation between states. Motives that have contributed toward the gradual development of the idea.—Objections to the existence of international law; their refutation.—International law is still undergoing the process of formation.—History of international law. Influence of religion upon its development in the Greek cities, in Rome. The rôle papacy played during the Middle Ages.—The writings of great lawyers and philosophers on the subject.—European international law; the idea too narrow.—Divisions of international law. Their different sources.

(1.) *Of persons*.—States, definitions, essential elements, comparisons of states and nations.—Different kinds of states, simple state, composed state, personal union, real union, confederation, federal state, half sovereign state, protectorate. Formation and recognition of states; the end of a state, cession of territory; absorption or annexation of one state by another. Legal consequences of the transformation of states concerning the nationality of persons, concerning public debt, concerning treaties.—Rights and performances of states; equality of states; sovereignty of states; obligations of states to each other; refugees; armaments; formation of insurrectionary bands.—Limitation of the state's sovereignty arising from treaties; international servitude; perpetual neutrality.—Interventions; the principles of intervention.—Conflicts of sovereignty relative to criminal, as well as civil law.

(2.) *Benefits of international law*.—Territory, limits.—Methods of territorial acquisition; its occupation.—On the sea; the principle of liberty of the sea.—Territorial seas; state laws concerning inhabitants of the coast.—Ships; nationality of ships; advantages reserved for national ships; coasting trade; intercourse.—Condition of ships on the open sea; right to visit.—Condition of ships in foreign ports.—Piracy.—Streams and rivers; rules applicable to them: Rhine, Danube, Congo, Niger.

(3.) *Obligations between states*.—Treaties, different kinds of treaties; their obligatory character.—Essential elements of these obligations.—How treaties are entered into, how ratified; international agreements.—The end of treaties.—Diplomatic agents, their prerogatives.—Inviolability, special territoriality.—Consuls, their attributes.

(4.) *International litigation*.—Peaceable solutions.—Diplomatic negotiations; mediation; conference and congresses.—Arbitration; principles of arbitration; the "Alabama Affair;" cases of arbitration that have rendered real service.—Violent solutions.—Measures of retorsion and retaliation.—Principal applications; embargo; blockade.—War; insurrection.—Trials of international regulation; the Declaration of Paris; of St. Petersburg; Conference at Brussels in 1874.—Declaration of war; its form and effects.—Expulsion of foreigners; defense of commerce against the enemy.—Kinds of treaties preceding contracts.—Belligerents and non-belligerents; interests arising from this distinction.—Free corps; partisans, guerillas, freebooters.—Lawful means of war.—Artifices; usages of colors (flags); uniforms; false alarms.—Publication of false information.—Spies; balloons.—Sieges, blockades, bombardments.—Treatment of prisoners of war; treatment of the wounded.—Convention of Geneva.—Conventions of war; suspension of hostilities; armistice; capitulation; bearers of the white flag.—Occupation of the enemy's territory; effects of such occupation upon administrative organization and that of justice; upon persons and their property.—Requisitions and enforced contributions.—Naval warfare; special rules; private

property on the sea; cruisers.—Neutrality.—Rights and duties of neutral nations on sea and land.—Contraband goods in war; blockade; right to visit.—Close of a war; treaties of peace; general clauses; special clauses.

(c) *Criminal law:—A. Penal code: infractions (or crimes) and penalties.*—Philosophic introduction; rational foundation of the social right to punish; general character of punishment or penalty.—Historical introduction: Crimes and penalties in antiquity and modern times.

(1) *Crimes.*—Definition and essential elements; legal elements; penal laws, non-retroactive, and not transferable upon territory. Material element: tentative. Moral element: causes of non-imputability. Defect in discernment in minors of less than sixteen years; insanity, compulsion or coercion. Defect in intention. Unjust element. Errors of the court. Order of law. Legitimate defense. Classification of crimes.

(2) *Penalties.*—*Consequences of crime:* Punishment; civil reparation. Organization of penalties; principal, additional and completing penalties. Proper punishment for crime: (a) suitable to the offense; (b) common for crime and offense; (c) suitable to contraventions; (d) common for three classes of infractions or crimes. Theories concerning penitentiaries; prisons. Return of convicts. Organization of civil reparation. Restitutions; damages, charges. Execution of the penalty and civil reparation. Compulsion by combination; solidarity, etc. *Application of punishment:* (a) In case of one perpetrator and only one infraction. Occasions. Aggravating causes: Quality of the functionary, relapse, aggravating circumstances. Attenuative causes: excesses. Attenuative circumstances; causes of exemption from and mitigation of penalty. (b) In case several perpetrators are arraigned for the same infraction. Accomplices. (c) In cases where one perpetrator is charged with several infractions: Concurrence of offenses and non-cumulation of penalties.—Remission of penalty, by death, pardon, amnesty, and rehabilitation, prescription (return).

B. Code of criminal instruction.—Actions causing infractions. Penal jurisdiction and procedure. Historical introduction: General history of the penal law since the sixth century of Rome to the present time.

First part—Actions which are considered infractions of the law. (1) Active and passive subjects of public and civil actions. (2) Exercise of public and civil action. Difference of the two actions. Exceptions; case in which procedure is based upon complaint, authorization, previous extradition (*obiter:* Extradition), previous judgment upon a preliminary question. Principle of double jurisdiction of the tribunals of repression and civil tribunals in regard to civil actions. Right of option and the rule "*una via electa.*"—Rule: "The criminal holds his rights as citizen in the state" [?] Extinction of liability to public and civil action (*obiter:* Prescription of the punishment).

Second part: Penal jurisdiction and procedure. (1) Police judiciary, general ideas, classification of agents, acts of the police judiciary which usually precede the indictment. (2) Preparatory instructions (indictments). (a) The judge of instruction cognizance. (b) Competence of court from the point of view of the indictment. (c) Acts which tend to collect evidence. (d) Acts which tend to secure the person charged: by mandates, or by detention, or bail. (e) Variations from ordinary rules in cases of flagrant crime. Delegation of the powers of the judge of instruction; (3) Jurisdiction of judges of instruction; of the first degree; the judge of instruction; report of this judge when the procedure is complete. Objections to his report. (b) Jurisdiction of the second degree. The chamber of accusation. Divers attributes. Its decrees. Appeal for reversal of its decrees. Appendix: Instruction upon new charges. (4) Jurisdiction of judgment. (a) General ideas. (b) Criminal court: organization, competence, "*saisine*"—procedure during the hearing; evidence. Appendix I: Procedure in contumacy. Appendix II: Procedure in cases of crimes committed by the press. (c) Correctional courts: organization, competence, how the tribunal of the first degree is instituted; procedure during the hearing, evidence; judgments by default, objections; contradictory judgments and appeal. (d) Sim-

ple police courts; organization, competence, how the court is instituted, procedure during the hearing, judgments, objections and appeal. (5) Extraordinary procedure; appeal of reversal of judgment; request for revision. Appendix concerning particular procedure before appellate courts. (6) The weight of a judicial opinion in criminal law.

(d) *Administrative law*.—This is taught according to the rules of French administration in the following order:

(1) Organization, general attributes of public authorities. (2) Legislative and constituting powers. Legislative powers compared, (a) of the Senate, (b) of the House of Deputies, (c) of Congress. (3) Executive powers in a series of chapters: agents, various modes of action, regular actions, administrative actions, individual actions, characters of administrative actions, auxiliary agents. Study of the various functionaries: President of the Republic, ministers, prefects, general secretary of the prefect, "sous prefect," mayor, assistant mayor, chief of police, councils, administrative guardians, state council, council of prefecture, general councils, ward councils, municipal council. Courts and administrative jurisdiction, separation of powers, administration in litigation, conflicts, state council, council of prefecture, jurisdiction of minister of state, of prefects, of mayors. Public responsibility, appropriations; courts of accounts.

II. Administrative law relating to corporations; State Department, commerce. Their domains, their appropriations. Public establishments: establishments for public utility, appropriations for the cause of public utility, public works.

III. Attributes of public authorities in certain special matters. Inspection of industries; mines, diggings, quarries; dangerous establishments, unwholesome, inconvenient establishments. Surveillance of religion. Organization of recognized religious denominations, appeal, abuse, religious congregation.

THIRD YEAR.

(a) *Commercial law*.—Sources of commercial law and the development of commerce before the nineteenth century. The acts of commerce, merchants and their particular obligations. Commercial societies and the principal points of the law voted for by the Senate. Merchants' exchange, agents of exchange, brokers, operation of the exchange and the law of April 28, 1888. "Term bargains." Commercial contracts, auctions, loans, securities, commissions, transportation, commercial usages. (Laws of May, 1858, June, 1866, January, 1886, and April, 1888.) Letters of exchange and other instruments of credit; the operations of banks and other money-lending institutions. Judicial liquidation; assignments and bankruptcy (laws of March, 1836, and April, 1890).

(b) *Administrative law*.—The same programme assigned to second year.

(c) *Private international law*.—I. *Causes of conflict of laws*.—Study of the principal codes of Europe and America; ideas of civil legislation compared particularly with regard to England, Italy, and Spain.

II. *Preliminary theories*.—(1) The state: Equality, independence, and sovereignty of states; relation of states; treaties; diplomatic agents; territory. (2) Of persons: Natural and legal persons; theory of nationality and domicile. (3) Relation of state to persons: Development of the distinction between natives and foreigners; consuls.

III. *Solution of conflict of laws*.—(a) Generalities: Position of the problem; rational solution; extra-territoriality; authority and executive force of foreign judgments; historical exposé; barbaric period; feudal period; doctrine of statutes; modern systems. (b) Development: The realm of national law (state, capacity, relation of family, succession); freedom of will; application upon contracts and testaments; domains and territorial law; criminal laws; law of public order; application to the common welfare. The rule: *Locus regit actum*; its facultative character; principal applications; orders concerning consuls.

PREPARATION FOR DEGREES. DOCTORATE.

For the purpose of acquiring the degree of doctor of laws special courses are arranged, embracing (a) Roman law, (b) history of law, and (c) constitutional law. The following is a detailed statement of the course for 1891:

I. *Roman law—pandects*.—Thorough review and supplementary explanation of the Pandects prescribed for previous years, especially the volume *Pro socio*; Digest, book 17; Codes, etc.

II. *Constitutional law*.—(1) Ideas of state, its origin and end. Different systems: Theocratic and divine law, theories of Greek and Roman antiquity, doctrine of social contract, historical school, sociological schools, principle of nationalities, languages, natural limits, etc. (2) National sovereignty, examination of objections raised against this principle and its consequences, its history and limits. (3) Political forms, their importance and legitimacy. (4) Powers in general. Principle of separation of powers. (5) Constituting powers; constituting assemblies and ratification by popular vote; constitutional revisions in France and other parts of Europe. (6) Legislative powers, elements of law, legislative mandate, universal and restricted suffrage, woman's rights, direct and indirect suffrage, one-name ballot and ballot by list, representation by minorities, Congress of two chambers, history of legislative powers in France, positive actual right, Chamber of Deputies, Senate, prerogatives of Parliament, its influence upon executive power. (7) Executive power, individual and collective form, hereditary succession or by election, prerogatives, ministers, responsible cabinets, parliamentary government. (8) Departmental liberties, ditto communal, administrative protection, decentralization, legislation compared. (9) Organization of colonies, history of legislation compared.

POST-GRADUATE COURSE.

Through the liberality of the State and municipal councils it has been made possible to organize in the faculty of law several courses known as supplementary courses in (1) Civil Law and Parental Authority; (2) Maritime Law or Admiralty; (3) Industrial Legislation; (4) Civil Procedure; and (5) Means of Execution.

Civil Law and Paternal Authority.—History, civil code and laws of the past. Legislation compared. (The professor discusses questions which are apt to cause conflict between family and state, such as obligatory school attendance, measures for the protection of maltreated and abandoned children, laws for the protection of children working in factories.)

Maritime Law.—The theory of anchorage and maritime insurance. General ideas, communal, their regulations, particular anchorage, boarding of a ship. Appendix. The "rules of York of Anvers"—Insurance, general and historical ideas. Nature of a contract. Essential elements of an insurance contract. Risks. Things to be insured. Premiums—Competency of persons to enter into contract. The insurer and the insured. Forms of contract. Various modes of insurance. Obligations of the insurer. Act of anchorage. Making over damaged cargo to the insurer. Obligations of the insured.

Industrial Legislation.—Intervention of the state in relations between employer and employé: I. Economical and historical introduction. Liberty of labor and its consequences; associations of labor; coalitions. (Law of 1884, concerning syndicates, and law of May, 1864.) II. Contract of hiring service, its occasions; protection accorded to infants, minors, and women employed in factories. (Laws of March, 1874, and March, 1889.) Subletting of labor, payment, wages, labor day (number of hours), the duration of the engagement. (Laws of March, 1848; of September, 1848, and February, 1883.) Participation of the laborer in profits. Aid and accident societies, collective protection. (Laws and bills referring to the matter. Guarantee for the laborer's payment. (Lien.) (Law of 1806 and other sources.) Responsibility in case of accidents (various bills). Proof of a contract and its dissolution.

(Law of 1854, decree of 1855, and a number of bills.) III. Contract of apprenticeship. (Law of February, 1851.) IV. The councils of Prudhommes.

Civil Procedure.—Definition of procedure, general rules for civil action. Ideas of court organization. Theory of the competence of civil jurisdiction. Theoretical and practical exposé of the development of ordinary procedure destitute of incidents in the lower courts, after adjournment, previous to rendering the judgment. Rules relative to divers categories of incidents in the lower courts. Summary procedure in the lower courts. Procedure in the courts of commerce. Ways and means of recourse: (1) Ordinary, objection and new trial; (2) extraordinary, repeated objections, civil petition, appeal to higher courts. General ideas concerning the execution of acts and judgments.

Ways and Means of Execution.—A. Practical work; exercises in analysis of the data furnished by the legal papers relative to the procedure of distribution; various modes reviewed. B. Theoretical course; seizure; conservatory seizures and their conversion into executory seizures; general ideas concerning conservatory seizures; seizures for claims; seizures for salary; foreign seizure; conservatory commercial seizure. Procedure in validity; competence. Procedure of conversion of conservatory seizures into executory seizures: competence.

III.—GERMANY.

We quote the law courses published by the universities of Berlin, Leipzig, Munich, and Tübingen, representative law schools for Prussia, Saxony, Bavaria, and Württemberg. It is to be regretted that they are only accessible in outline form; no detailed course of study or syllabus, such as is given in France (see II) is published by German universities. Each professor announces at the beginning of the half-year's course a list of subjects he proposes to treat, and the students, with the advice of the faculty, choose the ones they wish to hear. From semester to semester the students change their course and their professors, until at the completion of 3½ years they present themselves to be examined for graduation or degree.

Generally it is understood that the students take up encyclopedia of law, philosophy of law (natural law), institutes and history of Roman law, Pandects, Roman law of succession, and history of German law during the first year. In the second and following years the following subjects are studied: German private law, commercial law, exchange and admiralty, criminal law, constitutional and administrative law, ecclesiastical law, civil procedure, criminal procedure, medical jurisprudence, international law, private law of the respective states, French-Rhenish civil law (for lawyers of the Rhenish Province, in which the Code Napoleon is still in force).

(a) BERLIN COURSE OF LAW STUDIES.

(1) Encyclopedia and methodology of law; philosophy of law, with survey over science of state; comparative science of law; science of administrative law; statistic.

(2) Institutions of Roman law; history of Roman law; Pandects II. Roman family law; Roman law of succession; Roman civil procedure; practical exercise in seminary division of Roman law; selected cases of civil law; sources of Roman law; explanation of Justinian Institutes, Book III; exegetical exercises in the Pandects; explanation of selected chapters in the Pandects; discussion of common civil law; practical exercises in Roman and common civil law; practical exercises in the Pandects.

(3) Ecclesiastical law of Catholics and Protestants. Law seminary (division of canon law). Practical exercises.

(4) History of the German Empire and of German law. History of German law. History of German sources of law with explanation of selections. German private law, including law of fief. Consideration of a plan for a civil code for the Empire. Commercial law, including admiralty, exchange, negotiable papers. Seminary

exercises in sources of law during the Franconian period. Seminary exercises in history of public law in Germany during the Middle Ages. Seminary exercises in commercial law, including admiralty, exchange, and insurance. Seminary exercises in decisions in German private right and commercial law.

(5) General and German state law. General constitutional law of European states since the close of the Thirty Years' War (1648). History of constitutions in Germany during the nineteenth century. German and Prussian state and administrative law. Theories of state law during the nineteenth century. Prussian state and administrative law. Late reforms in Prussian administration. German colonial law, reference to foreign colonial laws. Interpretation of the present German imperial constitution.

(6) International law, public and private. Historical development of international law.

(7) German civil procedure. Civil procedure according to imperial law and common law. Constitution of courts. Exercises in civil procedure. Discussion of and practical exercises in civil procedure.

(8) Prussian civil law. Law of obligations. Law of property. Rhenish-French Law of Obligations. Code Napoleon.

(9) Criminal law. Discussions and practical exercises in criminal law. Medical jurisprudence.

The students of law attend lectures of the philosophical faculty in national economy, philosophy and science of government.

(b) LEIPZIG COURSE OF LAW STUDIES.

Institutions of Roman law and history of law. Pandects II. Roman family law and succession. Consideration of a plan for a civil code for the Empire. Saxon private right upon the basis of the Saxon civil code. Review of the Pandects with seminary exercises in common and Saxon law. Pandects I, General part and property. History of Roman law, including civil procedure.

German imperial and state law; German private law, including law of fief (*Lehnrecht*); commercial law, exchange and admiralty; pandects, property and obligations; exegetical exercises and digest in connection with the making of briefs; civil procedure.

German common criminal law and criminal procedure; bankruptcy and extraordinary kinds of procedure; ecclesiastical law and marriage law; history of German law; history of Roman law.

Saxon administrative law; institutions of Justinian; exercises in oral decisions of practical cases; international law, public and private; exercises in State law; legal status of the Protestant church in Germany; historical development of the church in Germany with reference to political questions in past and present.

The students of law attend lectures of the philosophical faculty in national economy, philosophy and science of government.

(c) MUNICH.—COURSE OF LAW STUDIES.

The law course in Munich is almost identical with the foregoing, except that special attention is paid to the students who intend to devote themselves (in the service of the state or corporations) to the administration of mines, forests, salines, finances, etc. These students are taught by a special faculty which in other universities is part of the philosophical faculty. This special faculty is called:

Faculty of State-Science.—The subjects taught are: Systems and science of government; history of culture and civilization during the Middle Ages; science of finance; national economy, its development since the decline of the Roman Empire, with special reference to German national economy; the uses of forests and related technology, arboriculture; excursions and practical exercises; meteorology and climatology, with reference to vegetation; chemistry of plants and agricultural chemistry;

agricultural and forestry statistics; surveying; mining; administration of mines; salines and similar subjects particularly adapted for the special needs of the kingdom of Bavaria.

(d) TÜBINGEN.—COURSE OF LAW STUDIES.

Institutions of Roman law; history of Roman law; Pandects I, general and property and also law of obligations; Pandects II, family law and succession.

German private right; copyright; patent law; German civil procedure.

Criminal law; selected theories of criminal law; international, private, and criminal law; criminal procedure; history of German criminal law; ecclesiastical law.

Private law of Würtemberg, review of private law, including family law and succession; exegetic exercises in Roman law in seminary.

National economy, general, including finance, export and import; special, including revenue and industrial policy, theories of communism, socialism and social democracy; science of finance, statistics of national economy, exercises in compilations, application of statistics.

General laws of state and constitutional law, administrative laws of Germany, state laws of Würtemberg, administrative laws of Würtemberg, practical international law.

NOTE.—The foregoing four courses are typical German courses. They afford the professors much liberty for enlarging upon favorite subjects, and the students chances for changing their teachers from time to time. Many students spend a year in one university studying Roman law, for instance, and then go, next year, to another university where they hear a renowned professor in criminal law, or whatever subject he may treat. The foregoing four courses also show that, though Germany may be unified politically, it is not so, as yet, in law and law practice.

IV.—SWITZERLAND.

From the Swiss law courses at our disposal we select that of the University of Geneva, offering more minute details than other courses. The course is one of two years and rather meager if compared with the foregoing French course, and it is explicitly stated in the announcement of the authorities that the course is not obligatory. As a matter of fact, it may be stated that though the course be designed for two years, it is rarely completed before the expiration of the third year of study.

FIRST YEAR.—General history of law, elements of civil law, political economy, political history of Switzerland (designed for Swiss students), comparison of civil legislation.

SECOND AND THIRD YEAR.—Pandects I and II; civil law; commercial law and criminal procedure; civil procedure; international law, public and private; public law; legal medicine; federal private law for Swiss students.

GENEVA.—FACULTY OF LAW.

(1) *General History and Philosophy of Law*.—(a) In antiquity, especially in Rome; (b) in modern times.

(2) *Public Law*.—(a) The state, (b) constitution, (c) government, (d) federal and cantonal government.

(3) *Civil Law*.—French civil code; contracts and obligations; eventual contracts; writs; bail; agreements; security; privileges and mortgages; medical prescriptions; general dispositions; proof of obligations; engagements entered into without convention; sales; exchange; hiring; loans; depositing goods.

(4) *Federal Private Law*.—Special exercises in the law concerning civil capacity and the federal code of obligations.

(5) *Civil Procedure*.—Exercises.

(6) *Elements of Civil Law*.—General introduction; family law and succession; "real" law (or laws concerning property) and law of obligations (general).

(7) *Comparative Civil Legislation*.—Comparative history of legislation of the occident and legal geography; general views concerning codification; nationality with the principles of modern legislation; marriage and descent after the principles of modern legislation in France, Austria, Germany, Italy, Switzerland, Spain, Russia, and England.

(8) *Commercial Law*.—Sources of commercial law; historical summary; the merchant and the acts of commerce; special obligations of the merchant; commercial courts; procedure; commercial registry; the auxiliaries of the merchant; contract of commission; pawn (security?); warrants; the exchange and its operations; agents of exchange; brokers; letters of exchange; checks; trade marks. Insurance: General principles, life insurance, fire insurance, accident insurance. Legislation concerning bankruptcy.

(9) *Roman Law*.—Pandects I and II: Law of obligations and of succession.

(10) *Legal Medicine*.—(For students of criminal law.)

(11) *Political Economy*.—History of the theories and doctrines of national economy, fundamental ideas; production and consumption of wealth; circulation use, and distribution of wealth; general ideas concerning the science of finance, elements of statistics.

(12) *Federal Law*.—Competence of federal courts in matters of public law, individual rights granted by the Constitution of 1874, procedure, jurisprudence, exercises in and commentary of federal laws, (a) concerning their establishment, railroads, mortgages, and forced liquidation of enterprises; (b) concerning civil responsibility of railroads and steamboats, factory owners, industrials, and contractors. General introduction into the responsibility and guarantees in matters of hiring help, accidents during work; (c) concerning Swiss naturalization laws and renunciation of nationality; (d) concerning extradition of criminals and accused.

(13) *Review of Roman law*. The family law.

(14) *Seminary*. Regular seminary exercises in practical cases under supervision of the professors.

V.—AUSTRIA.

The law course in Austrian universities is attended by comparatively more students than law courses in German universities. The reason is this: All students in Austria who aim more at general culture than at a preparation for a profession, such as members of the aristocracy and plutocracy, literary men, and tutors of wealthy boys, etc., attend the lectures of the law faculty, while in Germany such students are enrolled in the philosophical faculty. To all intents and purposes the courses of study of the law faculties in Austria are the same as in Germany. Still, it may be of interest to compare, with the preceding course of Berlin, the following one of Vienna, the leading university of Austria (exclusive of Hungary).

VIENNA.—COURSE OF LAW STUDIES.

(1) Philosophy of law. Encyclopedia and methodology of law (Bibliography).

(2) Roman law, Pandects; family law; general part and property; obligations and real estate; mortgages, securities; obligations (special part); property and servitude; exegetical exercises in law seminary.

(3) History of Germany (Austria was for over a thousand years part of the Roman empire of the German Nation); history of law; "Germanistic society."

(4) Ecclesiastical law and seminary exercises; legal casuistry.

(5) General private law; Austrian law of obligations; Austrian law of succession; selected parts of Austrian law of obligations; seminary exercises; mining laws.

(6) Austrian criminal law and procedure; seminary exercises in criminal procedure; interpretation of criminal law of Charles V (so-called Code Carolina).

(7) National economy and society of France; seminary exercises in same; state debts (accounts); science of government; seminary exercises in same.

(8) Industrial policy ; money and credit ; Austrian procedure in and out of court ; seminary exercises in same ; reading of "Duranti's Speculum."

(9) Austrian commercial law and exchange ; bankruptcy law and procedure ; theories and acts of commerce ; Austrian science of finance ; Austrian state accounts.

(10) Austrian state law ; administrative law ; history of Austrian central authorities.

(11) International law, public and private.

(12) Austrian statistics ; population of Austrian cities ; theories of statistics.

VI.—ITALY.

Law is studied in Italy as it is done in Germany and Austria. The professors announce annually or semiannually a list of the lectures they intend to give. The senate of the university or the law faculty see to it that all branches of jurisprudence are represented. The students choose the lectures with the advice of the professors and change their teachers and subjects, until at the close of a prescribed number of years of study they present themselves for examination for graduation or degree. Hence a detailed course or syllabus is not available. A peculiar feature of Italian universities is the great number of professors of law. (See chapter on statistics of law schools.)

We quote the courses of law offered by the universities of Rome, Bologna, and Parma.

(a) ROME—COURSE OF LAW STUDIES.

Political economy. Canonical law ; constitutional law ; commercial law. History of Italian law from the invasion of the Barbarians till the present time. International law ; civil law. Institutions of Roman law ; criminal law ; administrative law. Civil procedure and judicial institution (constitution of courts). Forms of diplomacy (international law). History of treaties. Science of finance and financial law. Science of statistics. Exegetical exercises in Roman law. Introduction into judicial science. Institutions of civil law. Philosophy of law. Account of state. Legislation compared. Contracts. Industrial laws. Penal institutions. Exegetical exercises in special parts of Roman law (Pandects II) ; administrative law with science of government and administration ; criminal procedure and law ; history of Roman law.

(b) BOLOGNA—COURSE OF LAW STUDIES.

Philosophy of law. Italian civil code ; constitutional law. Institutions of Roman law, administrative law and the science of government and administration ; criminal law and procedure ; civil law and procedure. "Judicial institution" (constitution of courts). Political economy. Commercial law. Roman law ; history of Italian law. Science of statistics. Medical jurisprudence. International law. Bibliography of jurisprudence. Institutions of civil law. Diplomacy (international law) and history of treaties. Paleography (study of ancient manuscripts) and diplomacy. History of Roman law. Science of finance and financial law. Science of government. Legislation compared. Seminary exercises in administrative law and science of government. State accounts. History of public law from antiquity till the present. Agrarian legislation ; special legislation. Sources of Roman law (in seminary).

(c) PARMA—COURSE OF LAW STUDIES.

Philosophy of law. Institutions of Roman law. Constitutional law ; commercial law. International law. History of Roman law. History of law since the invasion of the barbarians. Criminal law and criminal procedure. Civil law. Civil procedure and constitution of courts. Political economy. Administrative law and science of government. Science of finance and financial law. Science of statistics. Canonical law. Introduction into the science of law and institutions of civil law.

VII.—SWEDEN.

The northern countries, Denmark, Sweden, and Norway, follow in their universities the German method of announcing, annually or semiannually, courses of lectures, from which the students select what they deem necessary to prepare themselves for the "final reckoning." Detailed courses, so-called syllabi, are not available. We quote the announcements of the law faculties of the universities of Upsala and Lund. The former course has been laid out by the authorities into semi-annual work, and is therefore deserving more than a passing glance. It affords us an insight into the order in which the studies are recommended to be taken up. This order is not obligatory, but must be regarded as the joint advice of the faculty.

(a) UPSALA.—COURSE OF LAW STUDIES.

First half year: Legal encyclopedia (including law; rights limited by other spheres; essential momenta of the idea of law; rights and laws classified; special limits of their spheres; brief historical review of the development of law). Civil law. National economy. Exterior history of law (including Swedish and the leading features of common foreign law history).

Second half year: Civil law, continued; criminal law. National economy, continued. Interior history of law.

Third half year: Civil law, continued; criminal law, continued; internal history of law, continued; law procedure.

Fourth half year: Law procedure, continued; history of Roman law; state law (science of government); administrative law.

Fifth half year: State law, continued; Roman law; law of finance; "Näringsrätt" (food laws or pauper laws).

Sixth half year: Law of finance, continued; Näringsrätt (see above), continued; Church law. Military jurisprudence. International law, public and private. Legal encyclopedia.

Seventh half year. All the subjects of the sixth half year continued.

Eighth half year. General review of the whole course, and preparation for examination.

(b) LUND—COURSE OF LAW STUDIES.

The announcement of the law faculty in Lund is less minute but covers the customary ground.

History of law; law of property; criminal law; civil law and procedure; national economy; Swedish finance law; state law (science of state or government); administrative law; international law, public and private; Swedish state law; "Näringsrätt" (food or pauper laws?), special Swedish criminal law; Swedish family law; Roman law; history of Roman law; encyclopedia.

VIII.—RUSSIA.

The Russian universities are divided into those in which the Russian language is spoken and Russian influence is predominant (Charkow, Kasan, Moscow, Odessa, St. Petersburg, and Tomsk in Siberia), and those situated in territory originally German, Polish, and Finnish (Dorpat, Warsaw, and Helsingfors). The Baltic provinces, Kurland, Livland and Estland, are chiefly inhabited by Germans, hence the University of Dorpat is fashioned after the universities of Germany. It publishes its announcements in German, and German is the medium of instruction in many lecture rooms of the renowned institution. We quote from the announcement of 1891, giving the subjects in the order of the announcement.

Russian civil procedure; interpretation of Russian civil law; Russian state law, (administrative law and science of government); history of the law in the Baltic provinces; controversies (discussion?) of Roman law; exegesis of sources of Roman

law; theory of criminal law; practical exercises in criminal law; history of Russian civil law; political economy; historical development of state law and theories of state; constitution and administration of cities and rural communities in the Baltic provinces; general science of law; history of philosophy of law; Russian criminal law; Russian commercial law; exchange and admiralty; financial law; Roman law; exterior history of Roman law; institutes of Justinian.

Through the kindness of the Imperial Russian Minister of Public Instruction we have received a copy of the "Regulations and requirements for the examinations conducted by judicial commission" (bar examinations) which document affords us a view of what is being taught in all the law faculties in Russian universities. It is a syllabus of great value and should be carefully considered. We offer it in translation without abbreviation.

Roman Law (syllabus of course).

Principles (ideas) of Roman law, "*jus privatum*." Its significance for legal education. Roman institutions of civil law; German system.—Subject law. Birth and death of the physical person. Legal condition and limitation of capacity of law and action. "*Status et capitis demotio*." Slaves and free-born. Citizens with and without full rights. "*Persona sui et alieni-juris*." Influence of age, health, residence, civil honor, etc.—The legal person, origin, cessation, aspects, capacity of law and action.—Origin and cessation of law. Legal acts and their aspects. Condition of the validity (affectiveness, reality) of legal acts; principal forms of manifestation of will in legal acts; constraint and error; relations of legal acts: "*conditio, dies, modus*." Non-valid legal acts.—Donation. Its nature and the relation emanating from it. Prohibited influences: "*dolus et culpa*."—Influence of time on the origin and cessation of law. Prescription (antiquity).—Realization, guarantee (security) of law: "*cautiones, jus retentionis*."—Self and legal protection of a right: actions and their aspects; interdicts; exceptions.—Cessation of claims and acceptations. Prescription (antiquity) of a claim; its influence on the exception.—"*Litis contestatio*." Legal argument: "*praesumptio juris*." "*Res juridica*." "*In integrum restitutio*."—Objects of law. "*Res corporales et incorporales, mobiles et immobiles; res singulares et universitates rerum*;" divisible and indivisible things; consumable and non-consumable things; "*res as genus*," "*species et fungibiles*." Capital and accessory (incidental) things; incumbency, fruit, expenses. "*Res extra commercium*."—The right on things and its aspects.—Possession and its aspects and basis of its security (protection). "*Causa et conditio possessionis*." Finding and losing. Judicial protection of possession. "*Juris quasi possessio*." "*Bonae fidei possessio*."—Law (right) of property, its object, relation; "*condominium*;" "*dominium directum et utile*." Aids of recovering (finding) property; "*occupatio, deposit, traditio, usucapio*," condition of prescription.—"*Accessio; separatio et perceptio*." Specification, adjudication. Recovery of property by law.—Legal protection of the right of property. Aspects of claim; "*rei vindicatio; actio negatoria; actio in rem publiciana*." Cessation of property. The right on another's thing, its aspects. Servitude, its nature (idea); objects of servitude, idea, aspects, "*usufructus, usus, habitatio*."—Ways (means) of establishing servitude.—Mortgage (deposit, pledge); relation emanating from it; concurrence of several hypothecary rights. Establishing protection and cessation of the right of mortgage.—Hereditary use of ground with the character of right on another's thing: "*Agri vecigales*." Partnership, its aspects. "*Communio iucidens*." "*Lex Rhodia*." "*Pacta*." Obligation arising from violation of a right. Infringing on property-rights: Recompense of damage. "*Actio directa, utilis and in factum*." "*Turtum, damnum, injuria*,"—"Obligationes quasi ex delicto;" their aspects. "*Obligationes quasi ex lege*,"—Family—Laws (rights). Matrimonial alliance. Legal conditions of marriage. Consummation and cessation of marriage. Personal relations between spouses; property relations: Dowry—its idea (defini-

tion), object, form and time of its origin. Obligation attached to dowry. "Pacta dotalia." "Parapherna." "Donatio propter nuptias." Presents (donations) among spouses. "Actio rerum amotarum." Property-fines of divorce, of entering a second marriage and violating of mourning.—Concubinate.—"Patria potestas." Personal and property-relation between parents and children. Legal protection and cessation of paternal rule. Guardianship, its aspects. Institution of guardianship. Rights and obligations. Cessation of guardianship, claims against the guardian.—Curatorship.—Laws of succession. Definition (idea) of heredity and succession; its condition. Difference between succession after the civil law and the pretorial right. General and particular order of succession. Novellea 118 and 127. Succession by will (testament). Testator and heir. Form of will; its relation; "institutio heredis." Substitution. "Exhereditatio." Non-validity of a will. Succession, "contra tabulas." "Praeteritio." "Portio legitima." Novela, 115.—Renunciation. Legal consequences; claims to succession.—Legacy and "fideicommissus;" definition (idea), aspects and limitations. Codicils. Universals. "Mortis causa capiones."

Civil and commercial law (syllabus). A. *Civil Law*.—The sources of Russian civil law: (a) laws, ordinances, statutes; (b) customs, legal practice and science. Subjects of Russian civil law: general momenta of capacity of law of physical persons; general momenta of capacity of law and aspects of legal persons. Objects of law and the different aspects of property; money; nature of the legal relations; change, cessation of legal relations, legal facts; action, capacity of action, its general momenta; legal settlements, their parts and aspects, form, validity, and non-validity; organization and principal lines of the Russian notariate, written acts (documents), their special features; violation of a right, civil responsibility of an illegal act; protection of legal relations; ability of claiming; cessation of legal relations; influence of time; special feature of prescription. Legal relation of things, movable and immovable; possession and its protection; property right of immovable things; its limitation; ways of recovering the property right of immovable things. Title deeds, prescription of possession, land-tax books, etc., cessation of property-right of immovable things; compulsory expropriation. Right of movable things; significance of possession; their claim. Rights of authors, of inventions, discoveries, models, etc. Obligations, principal momenta of their relations; distinction of obligations with respect to their object, acts and participation of the subjects. Origin of an obligation, contracts, their conclusion, validity and security; contracts in favor of a third person; relation of a contract to the obligation arising from it; one-sided and both-sided obligations; change and cessation of obligation; classification of contracts; gifts; friendly settlement, donation contracts; change and purchase; loan and rent. Contracts concerning persons, hire of persons, commission and authorization. Partnership, protection, deposit, insurance. Matrimonial alliance, personal and property relation between spouses; relation between parents and children; affinity and property; guardianship and curatorship; their origin and cessation; succession according to law; relation and order of the heirs in general; succession of spouses; renunciation of succession; will (testament), its composition (formula), external and internal condition of its validity; contesting of the will; claims.

B. *Commercial Law*.—Sources of commercial law. Russian commercial legislation. Commercial acts, their classification. Commercial capacity of action. Commercial institution and its legal peculiarity. Stockholdership, its origin, limitation, and cessation. Partnership with alternate capital. Occasional (incidental) partnerships. Commercial transactions (agreements), papers. Exchange and its transactions in general; transactions with a premium. Bank transactions; discount drafts, open credit, transfer, check, deposit, interest calculation. Contract of transport (freight), transport by railway; storage and depots. Transactions of commission. Accident and life insurance. Origin of drafts and the present laws. Special feature of draft obligation; simple and transferable drafts. Form, issue of drafts—

acceptance, protest, and its consequence. Indorsement. Payment, protest and non-payment; returning. Loss, claim, prescription of a draft. Marine commercial law (admiralty). Recovering (finding), documents of vessels. Owner, skipper, pilot. Marine transport (freight), mortgage on a vessel. "Privilegium" on vessel and cargo. Bodmer contract, average. Recovery of things of stranded vessels. Marine insurance. Contracts; their aim, fulfillment; adjustments of averages.

C. *Civil Process*.—Sketch of civil law proceedings. Theory and fundamental principles of civil process. The court and its organization; power (jurisdiction) and instances of the court, its organs. Parties in the suit; citation of third persons; legal representation; accredited attorneys and private mediation. Acts of the process, their succession; terms. Expenses; right of poverty. Management of the provincial court. Presentation of claims and its consequence; citation of the defendant. Presentation (appearing) in court. Exposition by the parties. Counter-suit. Avowal of the claim. Incidents of the suit; evasion, bail (guarantee); putting away by the court. Argument, its fundamental principles. Mutual relation of the parties in the argument. Personal examination. Depositions by witnesses, by neighbors. Written depositions, test of veracity; estimation of written depositions. Oath and confession, conclusion of the pleadings, conclusion of the State Attorney's pleading, conclusion of the proceedings.—Sentence, its legal strength, sentence against absentees.—Abridged proceedings; preliminary execution. Justice of the peace; arbitration. Revision of sentence; appeals.—Justice of the peace, his jurisdiction; special feature of the proceedings in the court of the justice of the peace, its last reform. Commutation of sentence, its aspects and foundation; petition for commutation. Proceedings of commutation; sentence of the cassation; court. Execution of sentence, general regulations. Proceedings of the execution; the part of the court in the execution.—Organization of commercial courts; principal lines of its proceedings. Participation of the court in the establishing of legal facts.—Commercial and noncommercial insolvency; peculiar features of a concurrence of creditors.—Suit, its general method.

Criminal Law (Syllabus).

A. *Criminal Law*.—General and special sources. Penal code. Penal statutes, for the justice of the peace, martial, rural, in exile.—Criminal laws, basis, elements, working of the criminal law with respect to time, place and person; delivery of criminals. Explanation (interpretation) of and supplementing criminal laws.—The accused of a criminal deed; its imputability. Object of a criminal deed; when it is not a violation of law. Execution of a law, realization of a right, inevitable self-defense; consent of the injured.—Form of criminal deeds; their causal connection with the consequence.—Liberty of will. Intention. Carelessness. Accident, error, extreme necessity.

Realization of the criminal intent, its execution. Attempt and its aspect. Preparation. Declaration of intention. Participation in crime and its liability (responsibility). Partnership; idea, condition, and punishableness. Right of punishment; its basis and aim. Nature of punishment. System of punishment in its historical evolution; the penal system of recent legislation.—Capital punishment in its historical development and in the present law. Corporal punishment and mutilations in history and the present law.—Banishment, its aims, history, in present law.—Confinement. Its idea, condition and problems; its system. Organization of prisons. Institution for miners. "Patronate"—Forfeit of honor and right. Reprimand. Loss of right in history and at present. Police—surveillance. Property punishments, aspects.—Definition of punishments. Circumstances. Defining of punishments by the court. Commutation of punishments. Death of the culprit. Prescription. Clemency. Reconciliation with the injured party. Crimes against religion. Political crime. Attacks against the sacred person of the Emperor and against members of the imperial family. Conspiracy against officials. State trea-

son. Crimes against international law. Crimes against the government. Resistance, disobedience, and insults to officials; acting contrary to court decisions. Crime in the service of the state.

Crime against life. Elements (constituents) and punishment for killing with intention and by carelessness. Aspects of murder. Suicide. Poisoning of food. Abandon in peril. Duel. Corporal injury, intentional and unintentional; its classification. "Attentat" against (attack on) liberty. Confining. Kidnapping, Selling into slavery. Damaging of honor. Offence. Calumny. Defamation. Damaging of property, private and public. Arson. Submersion. Poisoning and infecting. Damaging of railways, telegraphs, hydrotechnical structures and warning signs. Appropriation of another's property: Theft, elements, aspect, and punishment. Robbery, keeping of immovable property by force. Fraud and cheating. Forgery. Counterfeit money. Crimes against family rights, against station (social standing).

B. *Criminal Process*.—Sources of criminal court proceedings. Judicial, administrative, and disciplinary examining. Writ and oral, publicity and nonpublicity in criminal court proceedings. General aspect of the organization. Distinction of the courts with regard to their elements. The public element. System of criminal courts. Organization of courts of the justice of the peace. Courts of the justice of the peace by lot, honorary and supplementary, rural and city courts; county circuits (convention) and department of government. Places. Provincial court. Justicial palace. Cassation, court juries; composition of the list of juries. Rights, obligations, responsibility, and condition of successful work of juries,—Preliminary proceedings. Court examiner (investigator). Participation of the police in the work of the court. Jurisdiction of criminal courts. Objective, local jurisdiction, order of defining the jurisdiction. Impediment of jurisdiction.—Advocateship, its history.—Procuratorship, its history and present condition.

Indictment, public and private; its condition and consequence. Interruption on account of physical or legal impediments; cessation of the indictment and its renewal.

A civil claim in a criminal action; its dependency and independency. Organs and order of conducting a civil claim in a criminal court. Defense in a criminal process. The defender and his relations to the defendant. Rights, duties, and responsibility of the defender. Argument (proof), evidence, its formal theory. Anglo-American system of argument (evidence). Various aspects of the argument (evidence). Confession of the defendant; deposition by witnesses. Experts. Declaration of neighbors. Material (*i. e.*, by things) and written testimonies. Examination, search, and arrest. Evocation and citation (summon) of the defendant. Measures for depriving the defendant of liberty. Judicial ordinance, definition, and decision. Resolution. Terms of the court; expenses. Preliminary proceedings and their tasks. Obtaining information. Preliminary investigation. The person participating in the preliminary investigation. Proceedings, work, and measures of the preliminary investigation. Delivery to the court; persons participating in it. Proceedings at the curator in the justicial palace. Special order. Public (open) session of the court. Examining in the court. Debate of the parties. Last word of the defendant. Order of forming (composing) the sentence. Questioning by the jury. Closing elucidation by the presiding judge (president). Verdict of the jury. Sentence. Revision of sentence. Significance limit, condition, and consequence of revision. Proceedings against absentees and answer to a sentence pronounced against such. Proceedings of an appeal. Its basis, subject, object, condition, and order. Limits and consequence of the proceedings of an appeal. Proceedings of cassation, their condition, limits, and consequence.

Renewal of criminal proceedings. Right of interceding for it. Extent of the proceedings pertaining to a renewal; its reasons, order, and consequence. Execution of the sentence of the court, its organs, condition, and order. Postponement of execution.

Organization, jurisdiction, and order of proceedings of rural and district courts. Martial criminal courts in Russia; their organization, jurisdiction, and the principal features of the process in the martial court.

Ecclesiastical law (syllabus).

The sources of ecclesiastical law of all the Christian churches in general and of the Orthodox, Roman Catholic, Armeno-Gregorian, and Evangelical Lutheran in particular. History of the sources of ecclesiastical law during the first nine (9) centuries. Apostolic regulations and ordinances. Decisions of general and local synods which were adopted by all the Christian churches; in particular, in the East: Canonical answers and epistles of the holy fathers and ordinances of local (endemic) councils. In the West: "Epistolae decretales" of the Roman Popes and ordinances of local synods. Monuments of state legislation in ecclesiastical matters in the Graeco-Roman Empire. Collections of ecclesiastical laws. In the East: The Canonical laws of Scholasticus and the Patriarch Photius. In the West: Dionys, the Younger, and Isidor. The significance of the latter's collection for the history of the laws of the Roman Catholic Church.

History of the sources of ecclesiastical law in Russia. The more important monuments of ecclesiastical legislation in Russia; survey of the sources in use of the ecclesiastical law in Russia at present. Composition (constituency) of the ecclesiastical community. Change of creed and its consequence. Clerical, state, and ecclesiastical hierarchy; condition and way of obtaining the hierarchical vocation; gradation of the hierarchy according to holy ordination and according to jurisdiction. Rights and duties of the clergy. Forfeit of spiritual dignity and its consequence. Monasticism; condition for entering into it; Monastic vows and diminution of personal property and ecclesiastical rights emanating from them (*capitis deminutio*). Difference between monks living in communities and singly concerning capacity of action. Forfeit of monastic state and its consequence. Church government (*hierarchia jurisdictionis*). The Archbishop; his rights, powers, and obligations. Church revenues. Spiritual consistory; its organization and object subjected to its jurisdiction and order of proceedings. Spiritual government; its organization and object subjected to its jurisdiction. Superintendents; extent and relation of their administrative authority. Organization of churches in the first century and during the period of the general councils. Constitution of the highest instance of the Russian Church, invested in the metropolitane and patriarchs. The holy synod; its origin, organization, and jurisdiction. The grand procurator. Offices of the synod.

Organization of the Roman Catholic, Evangelical Lutheran, and Armeno-Gregorian churches in accordance with the laws of the Russian Empire. Aspects and organs of ecclesiastical legislation. Authority of ecclesiastical courts; its significance for the respective church. Jurisdiction of ecclesiastical courts in history and at present with regard to offense and crime. Ecclesiastical punishments. Laws of marriage; condition and impediments of marriage; consequence of marriage; solution of marriage, divorce, annulment; consequence of both for the separated parties and for their children; competence of the legislature and court in matrimonial affairs; divorce suits. Church registers; their origin in Russia; rules for their keeping; their significance for civil law. Church certificates. History of the capacity of the church concerning property. Subjects and objects of the property right of the church. Privileges of ecclesiastical property with regard to taxes (finances) and judicial jurisdiction; the right to the use of ecclesiastical property; to dispose of it and to alienate it. Administration of ecclesiastical property.

International law (syllabus).

Basis and necessity of the existence of international laws. International meetings, congresses, conferences; the state as object of the international law; recognition of new states; rulers and private persons concerning international relations; the laws

of states concerning the relations between (their own) subjects and foreigners; emigration, naturalization; state territories with regard to international law; frontiers; the way of recovering a territory; colonization; free (open) sea; marine international laws; international obligations; concerning straits (especially of the Bosphorus and the Dardanelles); rivers and their navigation (especially the European commission of the Danube); Suez Canal.

International treaties. Condition of their conclusion; means of their security; cessation of their validity. International régime of states and their organs; Rights of embassy; diplomat agents and their laws. Consular law; consuls in Christian states and in the East; rights and duties of consuls; their jurisdiction. International relations with regard to economical interests. International commercial treaties. The Universal Postal and Telegraph Union. International ordinances concerning railways and the monetary system. International private law. Principal elements concerning the personal rights of foreigners, family and heredity. Execution of sentences of foreign courts. International criminal law; delivering of criminals. International dissensions; modes of peaceable solution, especially arbitration. Embargo and peaceable blockade. Laws of war; rights and duties of the warring states in a land war, especially in respect to war prisoners, wounded and sick soldiers; rights of the occupying army; rights and duties of the fighting states in a naval war; cruise; blockade; beginning and ending of war. Peace: Laws of neutrality; rights and duties of neutral states; laws of neutral commerce; contraband in time of war, blockade, and right of examining (searching).

Financial law (syllabus).

What the state needs and the way of satisfying the needs. Financial administration and its organs; financial institutions, central and local; organization of the treasury, controlling institutions of the finances. Budget and state appropriation; its composition and execution. Sources of the state revenues; their system in general and of Russia in particular. Different aspects of the state revenues. Revenues from state property, state lands, forests, mines. Revenues from state enterprises: Mint, mail, telegraph. Revenues from duties, from stamps, courts, etc. Revenues from taxes; nature of the latter source. General lines of the historical development of taxes; the main lines of their theory and system. Direct taxes; their general idea and their objects. Personal and land taxes, on edifices, professions, and income. Indirect taxes; general idea, main objects, way of collecting; taxes on things absolutely necessary and things not absolutely necessary. Custom-house duties; their nature and main objects. Land economy; principal aspects of its needs and the fundamental forms of laying out lands. State credit; its place in the present financial economy; form of state loans; ways of making a loan and of removing a debt.

Police law (syllabus).

Sources of the present police legislation. Organization of police institutions, central and local; measures of controlling the shifting population. Temporary movements and emigration. Passport system. Measures of preventing and checking crime against the established order, against persons and property. Extraordinary measures for preservation of order. Supervision of the press. Preventive (warning) and penal censorship: Printing offices, book trade, libraries; sanitary measures; care for purity of air, water, and food; prevention of diseases; contagious and epidemic diseases; quarantine; organization of the sanitary staff; apothecaries; hospitals; police of buildings, state and private, city and country; measures for warranting the supply of public provisions; prevention of famine; measures to obtain a general survey over the population; checking beggary; charitable institutions; coöperation with public education; educational institutions; public and private schools; coöperation in building of public roads, railways, canals, post and telegraph; coöperation in de-

veloping land economy; protection of farmers and vine-growers from injurious insects and phyloxera; fishery; forest development and preservation; developing of mines; mines on state lands; private gold-washing; quarries; naphtha wells; coöperation in developing industries; artisan institutions; factories; factory inspection.

IX.—BELGIUM.

Being unable to give the course of study in detail, the requirements for examination are given instead.

I. Candidates for graduation in Brussels are examined in introductory history of law and civil law; encyclopedia of law; history and the institutes of Roman law; natural law and philosophy law.

II. Candidates for the degree of doctor of law are expected to have studied Belgian criminal law, modern civil law, public law, administrative law and the pandects; commercial law; court organization and civil procedure; political economy. A practical course in criminal law is also given to these students, though they are not examined in it.

III. Candidates for the degree of doctor of science of government are required to have studied encyclopedia of law, natural law or philosophy of law; history of law and civil law; the first book of the civil code and law of succession; internal public law; history and the institutes of popular law, which includes legislation upon diplomatic usage; political economy and administrative law.

VIII. METHODS OF INSTRUCTION IN EUROPEAN LAW SCHOOLS.

One vital difference between the American or English college and the continental European university should be borne in mind. Our colleges (except a few like Yale, Harvard, Johns Hopkins, etc.), and the English universities and colleges are schools for general culture, while on the continent of Europe, notably in France, Germany, Austria, Hungary, Italy, Switzerland, Belgium, Holland, Denmark, Norway, and Sweden, the universities are professional schools of theology, law, medicine, and philosophy (both natural and mental). Each of these departments has its own corps of professors, called the faculty of theology, law, etc. These departments are more or less closely connected, so that students of theology, law, and medicine may partly be also students of the fourth faculty, *i. e.*, the faculty of philosophy, where the student of theology "hears" philosophy; the student of law, philosophy and history; the student of medicine, natural science. This fourth faculty is the one which prepares the teachers of secondary schools, hence is very extensive. When in Germany, for instance, the law course prescribed does not mention philosophy, it means that this subject is not slighted, but that it is studied in another faculty.

In American and English colleges and universities it is the custom that the student is held to a prescribed course laid down by the authorities of the institution. Optional studies are rare. In many American and English catalogues of law schools the books to be used are mentioned and the number of chapters or pages to be "learned" (which is not infrequently interpreted to mean memorized). In Germany it is left to the student to choose his subjects and his teachers. He may study one subject of the law course before or after another, according

to his inclination. The faculty publishes a guide advising to take up this or that branch of study during the first, others the second year, and so on, but there is no compulsion. He may study civil law or Roman law in one university during one year, and criminal law or another branch in another university, perhaps being induced to the change by the reputation of a famous professor.

In France a minute syllabus is arranged (see previous chapter, II. France), which must be followed; likewise in Russia, and a few other countries. Though the mode of procedure in Germany permits great irregularities in the students' attendance, it must be remembered that the necessity for strict guidance of the students is obviated by most rigidly adhering to the requirement of admission, which is, that the student be a graduate of a gymnasium, a classical secondary school, where the boys get a thorough academic preparation, acquire good habits, and "learn how to learn," that is, how to find, acquire, retain, and apply knowledge. The average age of students entering German universities is 20 years; in France, 18 years.

In America and England much text-book work, that is, much memorizing "*verbatim, literatim et punctuatim*," is done, and as a consequence the work in the law schools consists to some extent in recitations (Webster: "Rehearsal, or a repetition of something committed to memory"). Though much of that is found in France and Russia also, in German, Austrian, Italian, and other universities this method is looked upon with disfavor, it being claimed that it destroys spontaneity of effort and individuality.

The German law professor treats his students as men of judgment who need not be told what to learn from the printed page. He lectures on his subject, the student taking copious notes; then a colloquy follows in which a discussion of the matter just heard is held in parliamentary order, the professor presiding. Text-books are used as guides in study and as books of reference. Seminary exercises are held regularly every week and there is scarcely a professor in Germany who neglects to conduct them in connection with his lectures. (Compare the courses in previous chapter.) The seminary exercises consist in reviews, exegetical or explanatory conversation and criticism, discussion and trial cases. Much stress is laid by the German and French law schools upon "*Encyclopedia of Law*," which means a course of introductory lectures to the entire law course, giving definition of terms and a sketch of the field to be gone over so that the student may see his way and choose understandingly. Or, as an authority defines it: "The exhibition of jurisprudence as a science as an organic whole, showing the relationship of its facts and their proper function and aim," Also the subject of "*Sources of Law*" in history and ancient documents is carefully treated. This is done for the purpose of strengthening the knowledge acquired and the position taken in any question. It engenders the scholarly habit of thorough research.

It may be said without apprehension of contradiction, that in European universities law is considered a science. It is argued that the teaching of law in a university is justified only upon the plea that it is a science, and regarding it as such the law faculties bestow much attention upon the historical development of law, the conditions that gave rise to its enactment, and thoroughly teach the encyclopedia and bibliography of law, besides treating cases with their students, both hypothetical and real cases.

Moot courts¹ and practical exercises (object lessons, as it were, in law practice) in civil and criminal procedure are not an essential part of the seminary work in German, Austrian, and Swiss universities where the students, after having graduated, are required to pass a period of probation or practical work, lasting three years, so that the law course really lasts between six and seven years. The work in the university is chiefly theoretical, which fact is well illustrated by the theses or dissertations offered for the degree of doctor juris. The specimens of this kind of literature distributed every year are remarkable for their profound research and theoretical erudition.

In France, Italy, and Belgium the students are younger than in Germany, Austria, and the northern countries, hence greater attention is paid to following the minutiae of the prescribed course. This explains why it was possible to report an extensive syllabus from France, while from German universities only outlines of law courses are offered. But even in the universities of these Latin nations exclusive text-book work and recitations are abhorred.

In Holland, Denmark, Norway, Sweden, Finland, and the Russian Baltic provinces the example of German universities is followed.

In Russia proper (we quote from "Die Reform der Russischen Universitäten," Leipzig, 1886) the course is prescribed minutely (see Syllabus in previous chapter) and must be followed. At Kiew the course for the first year is as follows :

	Hours per week.
Encyclopedia of law	4
History of Roman law	4
History of Russian law	4
Political economy	2
Exercises in same	1
Statistics	1
Canonical law	2
Theology	2
Total	20

¹ "In some American law schools a complete judiciary system is attempted of courts of original and appellate jurisdiction, with clerk, sheriff, and other customary officers except the judgeships, where they sometimes sit as associates. In these courts students prepare papers and conduct suits in all forms at law or equity, including the preparation, service, filing, etc., of pleadings, decrees, orders, etc. They perform the duties of clerks and sheriffs, making the proper indorsements on papers, keep a docket, prepare records for appeals, appeal bonds, etc." (Report of committee on legal education, 1892, see page 12.)

For the second year the course is as follows:

	Hours per week.
Civil law	3
Roman law	4
Russian law	4
Political economy	2
Exercises in same	1
Statistics	1
Canonical law	2
Theology	2
Total	19

For the third year the course is as follows:

	Hours per week.
Civil law	3
State law	4
Criminal procedure	2
Finance law	4
International law	4
Medical jurisprudence (optional)	2
Criminal law	1
Practical exercises in same	4
Court constitution and jurisdiction	2
Police law	3
Practical exercises in same	2
Total	31

For the fourth year the course is as follow:

	Hours per week.
Criminal law	1
Practical exercises in same	4
Criminal procedure	2
Police law	3
Practical exercises in same	2
Review subjects	8
Practical exercises in same	6
Total	26

The course is here quoted on account of the statement of time devoted to the various branches. Lectures are given frequently on these subjects, during which much is dictated and written verbatim. The students take notes and write out in full what they remember. The papers are handed in and corrected by the professors, a work which in the nature of the case is done very hastily and imperfectly. Some synopsis or outlines of the lectures are procured frequently in lithographic form and used in place of notes taken in the class room. Text-book work predominates and recitations are held in which little room is left for individual work. The discipline is very faulty; frequently revolts of students occur, and the institution is closed for months to the serious interruption of the course.

IX.—CAMBRIDGE UNIVERSITY EXAMINATION PAPERS OF 1890.

Though it is impossible to furnish a detailed course (syllabus) for the study of law pursued in English universities, one can gauge the extent to which law is taught in England by perusing the questions submitted to candidates for degrees. These questions, which are here given, are particularly well adapted for comparison with the bar examinations conducted in this country.

SPECIAL EXAMINATION IN LAW FOR THE ORDINARY B. A. DEGREE.

LAW OF CONTRACT.

THURSDAY, *May 29, 1890—9-12 a. m.*

1. Define contract. Classify and describe shortly the different forms of contract existing in English law.
2. What simple contracts are required by law to be in writing?
3. What capacity has a married woman at the present day to enter into contracts? What must a plaintiff prove in an action against a married woman upon a contract entered into by her? .
4. Upon the lease of a house is there any, and, if any, what warranty implied that the house is fit for habitation?
5. What are the rules respecting contracts made in restraint of trade?
6. In what way does a negotiable instrument differ from other forms of simple contract? Describe shortly a bill of exchange.
7. Define consideration. What is the consideration given to a creditor who joins in an ordinary composition deed whereby he agrees to accept in full satisfaction of his debt a smaller sum than is due to him?
8. "According to the general law of England, the written record of a contract must not be varied or added to by verbal evidence of what was the intention of the parties." Enumerate and illustrate the exceptions to this rule.
9. Distinguish a penalty from liquidated damages. How does the law deal with penalties?
10. Explain and illustrate the different kinds of estoppel.
11. Explain the expressions: Escrow, del credere agent, quantum meruit, chose in action, merger.

THE CONSTITUTION AND FUNCTIONS OF PARLIAMENT.

THURSDAY, *May 29, 1890—1-4 p. m.*

1. Explain the historical importance of the Parliament summoned in 1295 and state shortly the system of representation adopted therein.
2. Distinguish between "adjournment of the House," "prorogation of Parliament," and "dissolution of Parliament" as to the authority by which they are carried out and their effect upon pending legislation and the constitution of the two houses.
3. Describe the changes introduced into the borough franchise by the representation of the people act of 1867.
4. State the points at issue and the actual decisions in the Berkeley and Wensleydale peerage cases.

5. How far and with what differences are the Scotch and Irish peerages represented in the House of Lords?

6. Describe the stages through which an ordinary public bill passes in the process of enactment.

7. What is the present law as to frequency and duration of parliaments? Explain the conditions which render necessary the annual meeting of Parliament.

8. Upon what occasions has the Crown, in order to coerce the House of Lords, actually exercised or threatened to exercise the right of creating peers? Explain the provisions of the peerage bill of 1719.

9. Compare the functions of the lord chancellor with those of the speaker of the House of Commons. How are these officers respectively appointed?

10. State the principles involved in any two of the following cases: (a) *Mist's Case*, (b) *Bradlaugh v. Gossett*, (c) *The case of impositions (Bate's Case)*, (d) *The case of Shipmoney (Hempden's case)*, (e) *Godden v. Hales*.

11. Explain the following expression: (1) Faggot voter; (2) Three-cornered constituency; (3) fancy franchise; (4) forty-shilling freehold; (5) successive occupancy.

ENGLISH CRIMINAL LAW.

FRIDAY, May 30, 1890—9-12 a. m.

1. State the extent to which infants and married women are exempt from criminal liability.

2. Define the crime of perjury, commenting shortly on the important points in your definition. What is subornation of perjury?

3. Explain privilege in relation to the law of libel. Distinguish between absolute and qualified privilege, giving instances of each.

4. Illustrate by examples the difference between (1) manslaughter and murder, (2) "voluntary" and "involuntary" manslaughter.

5. Explain the conditions which must exist to make the finder of lost goods who converts them to his own use guilty of larceny.

6. Distinguish between embezzlement and larceny by a servant. Give examples.

7. Explain clearly the meaning of the following expressions in relation to the crime of burglary: (a) Breaking; (b) entering; (c) dwelling house; (d) night.

8. Give an instance of forgery which is not obtaining property by false pretences, and state clearly the nature of the intent to defraud which is essential to the crime of forgery.

9. Explain the following expressions: (1) *Oyer et terminer*; (2) central criminal court; (3) count; (4) true bill; (5) grand jury.

10. What is peremptory challenge? In what classes of crime and to what extent has a prisoner the right of peremptory challenge? Has the prosecution this or any similar right?

11. Explain the following rules and mention the exceptions to them: (a) Hearsay evidence is not admitted; (b) leading questions may not be asked in examination in chief.

PROBLEMS.

[Full reasons are to be given for all answers.]

FRIDAY, May 30, 1890—1-4 p. m.

1. A employed B to make the following bets for him, (1) for £20, (2) for £10, and (3) for £5. The first bet was lost and B paid the money. The second bet was won and B received the money. The third bet B carelessly omitted to make; had he made it the bet would have been won. Can B sue A for the amount paid by him on the first bet; and can A sue B for the amounts of either or both of the second and third bets?

2. A sells goods to B, who is really acting for an undisclosed principal, C. A brings an action against B and signs judgment against him for the price of the goods, but fails to obtain the money from him. A afterwards discovers that C is the principal. Can A then also sue C?

3. What is the measure of damages in an action for breach of promise of marriage? A promises to marry B upon his father's death, but during his father's lifetime renounces the contract. Can B bring an action at once against A?

4. A, B, and C are boys at school. A persuades B to put an emetic into C's tea in order that C may be made sick, but not intending further mischief. C is killed by the dose. Is either A or B guilty of any offense?

5. A and B are playing football. B by way of charging A jumps in the air and strikes A in the stomach with his knee. A dies from the results of the injury. Discuss the question of B's guilt. How far would the question whether charging by jumping in the air was forbidden by the rules of the game be relevant?

6. A gamekeeper not authorized to kill rabbits for his own use, kills some and sells them for his own profit. Is he guilty of any and what offense?

7. A puts down in the street an imitation diamond ring, and as B, a countryman, is coming along picks it up pretending that he has just found it, pointing out to B that it is a valuable ring and offering to share his good fortune with B. Assuming that they then agree either (a) that B should keep the ring, paying A £3 for his share of it, or (b) that they should meet again the next day, B keeping the ring in the meantime and giving A £3 by way of security, and that A in both cases decamps with the money, of what offense is he guilty in each case?

8. A is indicted in England for bigamy and proves the following facts: (1) That he is a Frenchman and the second marriage took place in France; (2) that the other party to the second ceremony was his first wife's sister; (3) that he had not heard of his first wife for more than seven years before the second marriage; (4) that he had reasonable grounds for believing that his first wife was dead at the time of the second marriage; (5) that he was married the second time under a false name; (6) that he had been divorced from his first wife before his second marriage. Do any and which of the above afford good defenses to the crime with which he is charged?

9. In what respects do the rules relating to the election of a member of Parliament to represent the University of Cambridge differ from those of ordinary elections, as to the mode of conducting the election and the qualification of the voters?

10. Discuss the question as to whether under the existing law an undergraduate in residence at Cambridge is entitled to a vote at an election of a member of Parliament for the borough.

SPECIAL EXAMINATION IN MODERN HISTORY FOR THE ORDINARY B. A. DEGREE.

OUTLINES OF GENERAL ENGLISH HISTORY.

THURSDAY, May 29, 1890—9-12 a. m.

1. "With Penda heathendom passed away." Show the truth of this statement by reference to the history of the conversion of the North to the Christian faith.

2. Write a brief account of the character and policy of King Cnut.

3. Give the dates and results of the following battles: Tenchebrai, the Standard, Lincoln, Bouvines, Lewes.

4. On what grounds did Edward I. make war upon Llewellyn of Wales? What was the result of the struggle?

5. Write a short life of one of the following: Thomas à Becket, Cardinal Wolsey, Archbishop Cranmer.

6. Narrate the circumstances of (1) the capture, (2) the loss of Calais, giving the date of each occurrence.

7. Discuss the foreign policy of Oliver Cromwell.

8. Under what circumstances did William of Orange resolve to lead an expedition into England? Mention the immediate results of his enterprise.

9. How and when did Great Britain acquire Canada?

10. What was the cause of the outbreak of the Peninsular war? Give the dates and results of the more important battles fought in it.

OUTLINES OF ENGLISH CONSTITUTIONAL HISTORY.

THURSDAY, May 29, 1890—1-4 p. m.

1. Explain the constitution and state the chief powers of the Witenagemot.

2. Name and indicate briefly the nature of the administrative reforms introduced by Henry II.

3. Give the substance of the clauses of Magna Charta which relate to (1) the church, (2) levying taxes, (3) doing justice.

4. "The old English Kingship was elective." Examine this statement and trace the growth of the hereditary principle.

5. Of what elements was the Parliament of 1295 composed? Explain its importance and indicate the meaning of the phrase "the three estates of the realm."

6. Give instances of interference, during the fourteenth and fifteenth centuries, with (1) freedom of speech in Parliament, (2) the freedom of members of Parliament from arrest. Name any other privilege of Parliament existing at this time.

7. Investigate the causes of the increased power of the Crown at the commencement of the Tudor Period.

8. Explain the constitution and functions of the court of high commission. Under what act of Parliament was it established and when? Was it ever revived?

9. Trace the growth of the cabinet. When was the system of cabinet government finally established?

10. Sketch shortly the history of the struggle by which the liberty of the press has been attained, mentioning the means by which at different times it has been restricted.

GENERAL AND CONSTITUTIONAL HISTORY OF ENGLAND, 1603-1649.

FRIDAY, May 30, 1890—9-12 a. m.

1. Show how the pecuniary necessities of James I. brought him into conflict with his parliaments, and state briefly the leading arguments on either side in the discussions.

2. Give an account of the foreign policy of George Villiers, duke of Buckingham.

3. Trace the rise of the Puritan party in England from the accession of James I. to the beginning of the first session of the Long Parliament.

4. Narrate the circumstances connected with the imprisonment and death of Sir John Elliot.

5. Illustrate Wentworth's views on government from the history of his rule in Ireland.

6. What were the causes and results of the Bishops' wars with Scotland? How did they affect English politics?

7. Show in some detail how the Long Parliament in the first year of its existence destroyed the system of government which Charles I. and his ministers had endeavored to carry out.

8. Point out the effect of religious differences upon the position and policy of the party opposed to Charles from the passing of the Grand Remonstrance to his death.

9. Wherein lay (1) the military strength, (2) the military weakness of the Royalists and the Parliamentarians in the civil wars?

10. Compare the terms offered to Charles by Parliament and the army after his overthrow in the field. How did the king meet the offers made to him and what effect had his conduct with regard to them upon subsequent events?

THE RISE OF THE BRITISH POWER IN INDIA.

FRIDAY, May 30, 1890—1-4 p. m.

1. Sketch briefly the history of the British East India Company during the seventeenth century, pointing out the difficulties with which it had to contend.
2. Give an account of the struggle in India between the English and the French in 1746. What were its results?
3. Describe the capture and defense of Arcot by Clive and explain the circumstances which rendered this event so important.
4. Sketch the career of Bussy.
5. Relate the events which preceded the tragedy of the Black Hole. How was this avenged and by whom?
6. What do you know of the Mahratta empire and its chief feudatories? What was the convention of Wurgaum? Describe the war which followed it.
7. What were the principal charges brought against Warren Hastings? Describe briefly the circumstances on which they were respectively based.
8. Give an account of Hyder Ali.
9. What reforms were introduced by Lord Cornwallis? Describe them.
10. Write briefly of: Sir Thomas Roe, Jan Begum, Jinji, Angria, Lally, Nandcomar, Amyatt, Forde, Hector Monro, Paniput.

LAW TRIPOS.—PART I.

JURISPRUDENCE.

SATURDAY, May 10, 1890—9-12 a. m.

1. Compare the various significations of *Jurisprudentia* in the institutes and digest with that given to Jurisprudence by Austin. Explain the distinction drawn by the same author between jurisprudence and the science of legislation; showing what subjects are included in the latter and excluded from the former. What is the meaning of the terms analytical, general, and comparative, in reference to jurisprudence.
2. "Municipal law is a rule of civil conduct, prescribed by the supreme power in a state, commanding what is right and forbidding what is wrong." Explain and discuss the terms of this definition, showing where it agrees with and where it differs from that of Austin. Could Blackstone consistently admit the existence of rules of positive morality?
2. Explain Austin's criticism of Bentham's definition of a state; and point out the ambiguities attaching to the expression "a sovereign state." What do you consider the most logical ground for refusing the name of state to any family?
4. A, the owner of a passenger ship, has insured her considerably above her value. With a view to the loss of the ship, he recommends to the captain, B, as an experienced steersman, one C, whom he knows to be confident in his own ability, but really inexperienced. B accepts C without any further inquiry, and C, by his incompetence, runs the ship ashore at night. The captain and other officers, with some of the passengers, are washed overboard, and all drowned except the captain, who is picked up by a passing vessel. The stranded ship floats off the next day, and C, now in sole charge, brings her with difficulty into port, more of the passengers dying from cold and exposure. Discuss, from Austin's point of view, the legal liability of A, B, and C, respectively, in the case of the passengers who lose their lives at or after the stranding of the ship.
4. State Austin's view as to the "proper meaning" of the English legal term malice, and its "abusive extension." Explain the origin of this "proper meaning," and illustrate by any legal phrases or maxims its "abusive extension." What signification will, in your opinion, best cover all the cases in which this term, or the adjective derived from it, occurs.

6. *Æquitas*, as understood by Austin, arose out of the special circumstances of one branch of Roman law. Explain this position, and show how Austin's view can or can not be reconciled with the various meanings which the word *Æquitas* or equity has actually borne in Roman or later times.

7. Bentham's proposal of a general code, as distinct from special codes, was in fact, according to Austin, the *jus rerum*. Interpret and discuss this statement.

8. Explain the expressions private wrongs and civil procedure, discussing the question which arises on the nomenclature of the former. What do you consider to be the proper place for the subject designated by the one or other of these expressions, in a scientifically arranged corpus juris?

9. Discuss the various meanings of the word property as opposed, respectively, to servitude, obligation, communal ownership, individual goods and chattels. How far do you consider it historically true that "All property is founded on adverse possession ripened by prescription?"

10. Discuss the various advantages and disadvantages of English case law, as a gradual addition to the English corpus juris.

ROMAN LAW. II.

SATURDAY, May 10, 1890—1:30-4:30 p. m.

1. Translate and explain: *Hi qui in causa mancipii sunt, quia servorum loco habentur, vindicta, censu, testamento manumissi sui juris fiunt. nec tamen in hoc casu lex Aelia Sentia locum habet. itaque nihil requirimus, cuius aetatis sit is qui manumittit, et qui manumittitur: ac ne illud quidem, an patronum creditoremve manumissor habeat. ac ne numerus quidem legis Fufiae Caninae finitus in his personis locum habet.*

2. Compare the position of a (civilian) *filiusfamilias* in A. D. 35 and A. D. 535, respectively, as regards (a) property, (b) capacity to bind his *paterfamilias* by his contracts.

3. In what respects, in the time of Hadrian, did the position of peregrinus, Latinus, Latinus Junianus, and *libertus civis* differ from that of a full citizen?

4. In what different ways did Roman law provide for the prompt acceptance and administration of the estates of deceased persons?

5. '*Nec enim matri filium filiamve exheredare necesse est, sive de iure civili quæramus, sive de edicto prætoris, quo præteritis liberis contra tabulas bonorum possessionem promittit: sed aliud eis adminiculum servatur.*' Explain this passage.

6. Ideoque si extraneo legatum fuerit, inutile est legatum, adeo ut Sabinus existimaverit ne quidem ex senatusconsulto Neroniano posse convalescere: nam eo, inquit, senatusconsulto ea tantum confirmantur quæ verborum vitio iure civili non valent, non quæ propter ipsam personam legatarii non deberentur. Translate, and explain the nature and operation of the enactment referred to.

7. Define carefully the meaning of "*liberi*" as a technical term in the prætorian scheme of intestate succession. What classes of persons (other than *liberi*) received an improvement in their rights of succession through the third head of Bonorum possessio ab intestato?

8. In what different ways could an action relating to ("*dominium*") be tried in Gaius's day, and which of them would be most likely to secure the specific restitution of the property in dispute if the plaintiff were successful? Construct its formula.

9. Quare autem hæc actio desiderata sit, cum de eo quod nobis dari oportet poterimus sacramento aut per iudicis postulationem agere, valde quaeritur. To what action does this relate, and what explanations have been offered of the question raised by Gaius?

10. Lay down rules for determining whether an action whose formula is submitted to you is (a) in rem or in personam: (b) stricti iuris or bonae fidei: (c) resisted by a direct traverse or a plea. Give examples.

ROMAN LAW I.

MONDAY, May 12, 1890—7-12 a. m.

1. Enumerate under general heads what are believed to have been the contents of the twelve tables. Name the principal authorities for individual provisions of that code, their arrangement and order. How do you account for the fact that no copy has come down to us *in extenso*?

2. What appears to have been the object of the formalities of *mancipium*? Point out their reference, direct or indirect, to the Servian organization and perhaps an even earlier state of things. Explain the connection of *nexum* with *mancipium*, the mode of the debtor's becoming *nexus*, and the legal consequences of that condition. State the reform effected by the *lex Pectilia*, and the result with regard to contractual obligation generally.

3. State in their historical order, with reasons for such order, the different meanings borne by the term *jus civile* in Roman law. Explain, in particular, the case of that *jus civile* which, according to Pomponius, *sine scripto venit, compositum a prudentibus*.

4. What do you consider to be, approximately, the dates of the *lex Aebutia* and the *duae leges Juliae*, by which Gaius tells us *effectum est ut per concepta verba id est per formulas litigemus*? Explain these words, pointing out the principal features in the change of system effected.

5. Give your arguments for or against the theory of an actual or historical *jus gentium*, pointing out any particular portions of Roman law which have been borrowed or alleged to have been borrowed from other nations.

6. Distinguish the interdicts of the praetor from the other notices or orders issued by the same magistrate. Describe the circumstances in which the use of interdicts probably arose. Explain the complications in that use which resulted from the introduction of the formulary system and the return to simplicity which followed its abolition.

7. Justinian, in one of his novels, attributes to "Antoninus named Pius" the gift of Roman citizenship to all his subjects. Discuss the difficulties of this passage both as to the personality of the Emperor and the apparent inoperativeness of the gift mentioned.

8. Show how an indefeasible provision for children out of the property of a deceased parent was originally favored at Rome by customary law, then endangered by interpretation of statute, subsequently maintained by court practice, and finally secured by Justinian's latest legislation.

9. State the general principles, in Roman law, according to which a right of action did or did not pass to and against the respective successors, by death, to the original parties.

10. Sketch and explain the general order of subject-matter in Justinian's Digest, showing the artificial character of his larger divisions. Account for the position of any one or more of the following titles: *De Pactis*; *Nautae*, *Cauponae*; *Ad Legem Aquiliam*; *De Aedilicio Edicto*; *De Acquirendo Rerum Dominio*; *De Obligationibus et Actionibus*.

PUBLIC INTERNATIONAL LAW.

MONDAY, May 12, 1890—1.30-4.30 p. m.

1. Explain the meaning and force of the distinction commonly drawn between the "natural" or "necessary" and the "voluntary" or "positive" law of nations. Give instances of rules belonging to either class.

2. What rules relating to the original acquisition of territory are in force at the present day?

3. "Had the French court conducted itself with good faith (in 1778) and maintained an impartial neutrality between the two belligerent parties, it may be doubted

whether the treaty of commerce, or even the eventual alliance, between France and the United States could have furnished any just ground for a declaration of war against the former by the British Government." (Wheaton.) Give your reason for agreeing with or dissenting from this statement.

4. A body of insurgents, who have not yet been recognized as belligerents, attempt to exercise the right of searching neutral vessels. Discuss the question of their liability to be treated as pirates.

5. A belligerent state sends an order for rifles to a neutral firm. The manufacturer has not a sufficient stock in hand to meet the demand and asks his government to be allowed to send rifles intended for the government service, for which there is no immediate need. Will any offense have been committed against international law if this permission is given?

6. What effect has the occupation of a district by an invading force upon the rights and duties of its inhabitants, and how is the occupation itself to be defined?

7. Note the effect of the outbreak of war upon the following transactions: (a) A partnership between subjects of the contending states. (b) An ordinary contract between the same parties. (c) A treaty giving to one state a right of fishing on the territorial waters of the other. (d) A treaty engagement to join in suppressing the slave trade. (e) An engagement to abandon the use of privateers.

8. A neutral ship carrying military stores to a neutral port is arrested by a belligerent. What evidence of ulterior destination will be held to justify the seizure, and what will be the effect of condemnation.

9. Explain the nature and extent of the privilege of extraterritoriality as accorded to vessels of war.

10. A British subject is arrested and imprisoned in the United States (the habeas corpus act having been suspended by the President) on suspicion of being engaged in treasonable practices against the United States Government. The legality of the President's action is disputed. Has a case arisen for the interference of the British Government?

11. A, a neutral merchant, purchases property which has been captured by a belligerent ship and condemned in a prize court of the captor's country. The ship which made the capture had been fitted out in neutral territory and the captured property was lying in a neutral port at the time of sale. Examine A's title to the property.

ROMAN LAW. III.

TUESDAY, May 13, 1890—9-12 a. m.

1. *Iure civili constitutum fuerat ut qui bona fide ab eo qui dominus non erat, eum crediderit eum dominum esse, rem emerit vel ex donatione aliare quaris iusta causa acceperit, is eam rem....usucapiat, ne rerum dominia diutius in incerto essent.* Explain this passage with reference to the words italicised, and discuss whether it is a correct account of the original purpose of Usucapio.

2. Translate and explain: *Venditae vero et treditae non aliter emptori adquiruntur, quam si is venditori pretium solverit vel alio modo ei satiscecerit, veluti ex promissione aut pignore dato. quod cavetur quidem etiam lege duodecim tabularum: tamen recte dicitur et iure gentium, id est iure naturali, id effeci. sed si is qui vendidit fidem emptoris secutus fuerit, dicendum est statim rem emptoris fieri.* What evidence is there that property could be conveyed by *Traditio* at the time of the Twelve Tables?

3. State the law as to the usufructory's rights (a) to timber, (b) to minerals.

4. Explain what is meant by the phrase "*abuti proprietate*" in relation to slaves, houses, and gardens subject to a usufruct.

5. Translate and explain: *Nam et si fundi usus fructus fuerit legatus et sit ager, unde palo in fundum, cuius usus fructus legatus est, solebat pater familias uti, vel salice vel harundine, puto fructuarium hactenus uti posse, ne ex eo vendat, nisi forte salicti ei vel silvae palaris vel harundineti usus fructus sit legatus: tunc enim et vendere potest.*

Proinde si forte usus fructus in annos singulos fuerit legatus et iste servus operas suas locavit et stipulatus est ut supra scriptum est, prout capitis minutione amissus fuerit usus fructus, mox restitutus, ambulabit stipulatio profectaque ad heredem redibit ad fructuarium.

Si colono tuo usum fructum fundi legaveris, usum fructum vindicabit et cum herede tuo aget ex conducto et consequetur, ut neque mercedes praestet et impensas, quas in culturam fecerat, recipiat.

Si extraneo scripto et emancipate praeterito matri defuncti deducto usu fructu proprietas legata sit, petita contra tabulas bonorum possessione plena proprietas pietatis respectu matri praestanda est.

6. Under what circumstances (*a*) will an action on the cautio usufructuaria be the sole remedy of the dominus proprietatis; (*b*) can the dominus impose a servitude on land subject to a usufruct; (*c*) can a slave acquire as heir or legatee for the usufructuary rather than for the dominus?

7. "Contracts are absorbed in pacts." How far does this truly describe the condition of contract law in the time of Justinian?

8. Describe the nature of and the law relating to fideiussio. What advantages had it over earlier forms of suretyship?

9. Does the maxim *caveat emptor* hold good in Roman law as regards (*a*) the vendor's title (*b*), defects in the res vendita?

10. Define the delict of Iniuria, and explain, with illustrations, the rule "*patitur autem quis iniuriam non solum per semet ipsum.*"

ENGLISH CONSTITUTIONAL LAW AND HISTORY.

TUESDAY, May 13, 1890—1.30–4.30 p. m.

1. What is meant by the "King's peace?" Trace the history of the institution till the close of the thirteenth century.

2. Describe the nature of the business transacted in the ancient county court. Who were the suitors and what were their functions?

3. Trace the distinction gradually formed, in the course of the fourteenth century, between statutes and royal ordinances, and illustrate the attempts made by the Crown, during the same period, to evade the demands of the estates, by manipulations of petitions, by saving clauses, by a suspending power, or by actual revocation.

4. Describe the three estates of Parliament at the time of their first development in English constitutional law. What is the theory of the representation of estates, and how far do you consider that it is practically carried out in our present Parliament?

5. Explain the nature and jurisdiction of the court of star chamber. In what sense may it be said to have exercised a permanent beneficial influence on English law?

6. "The separation of the Church of England from that of Rome was a political and legal rather than a religious reformation." Explain and discuss this statement.

7. Explain the terms supply, ways and means, appropriation. When and how was the principle of appropriation established, and how has its observance been secured? How has its introduction affected the relations of legislative and executive?

8. State the leading provisions of the habeas corpus act. What defects in the law was it designed to remove? In what respect has it since been amended?

9. How far can the House of Commons claim to be the interpreter of its own privileges, and how far has it to submit to have them defined by the law courts?

10. What clauses of the act of settlement have been subsequently repealed? How would the constitutional development have been affected by their retention in their original form?

ESSAYS AND PROBLEMS.

[Not more than five to be attempted.]

WEDNESDAY, May 14, 1890—9-12 a.m.

1. Describe the various agencies by which the development of international law is effected at the present day, and estimate their relative importance.

2. Germany being at war with France, Algiers is blockaded on January 1. An English ship is lying there, on which a French merchant is shipping wines for sale in Hamburg on his own account. Her master now refuses to receive any more, and sails on January 4. The merchant loads the remainder on a vessel of his own, in which he also ships some wines belonging to his correspondent in Heligoland, and dispatches her to Hamburg. A German man-of-war captures both vessels on January 26; and also, on January 28, a Russian vessel bound for Algiers, but without cargo. On January 27 the garrison of Algiers retired inland and the Germans entered the town. A prize court is sitting at Hamburg on the three vessels. What decrees will it make as to restitution or condemnation, freight, and damages?

3. Illustrate, by some definite historical instance, the origin of a state in connection with the origin of law.

4. Caius by his will appoints his only legitimate child, a boy under puberty, to be *heres*, naming a tutor. He leaves to his friend Maevius, a very old man, the right to reside in his town house, and to use the services of his town establishment of slaves. He leaves the usufruct of his estate in the country (unbuilt upon but about equal in value to the town property) with that of the slaves upon it, half to Dama, a still younger child by a slave, whom (Dama) he enfranchises by his will, half to the municipality in which the estate is situated. The residue of his property proves to be worth next to nothing.

Aditio is properly made; subsequently to which Dama is adopted by Maevius, who arranges with the municipes as to the parts of the country estate, with its slaves, which he and they shall respectively take, and shortly afterwards dies, leaving Dama his *heres*. Dama continues to reside in Caius's town house and to use the services of the town slaves, as well as to enjoy the produce of half of the country estate. The municipes build on their half of the land, thereby greatly improving its value, and sell their share of the country slaves. What are the present rights to the different parts of Caius' property, and what steps should the tutor take on behalf of his ward?

5. A Roman citizen, in the time of Theodosius II, has in his power two sons, the younger seven years of age, each entitled to valuable property in right of his mother (deceased), besides an emancipated son who has a lucrative business in Greece. His own chief estate is in mortgage to Sempronius. He desires to make a nephew (Titius) his sole heir; to leave the mortgaged estate unencumbered to the emancipated son for life, with legacies to some of his freedmen; and in the event of the younger son in power dying impubes, he wishes his share of the maternal property to revert to a maternal uncle (Seius). What rules would the draftsman have to bear in mind in preparing the will? Sketch its outline.

6. Describe the national church as a part of the constitution, showing in what sense and to what extent it is "established" and "endowed."

7. Examine the history and causes of the institution of primogeniture in western Europe.

8. Describe the present character and scope of the prerogative as a part of the constitution.

9 Explain the analogy between the laws of nature and positive laws.

10. Describe the constitutional limitations to which the House of Commons is subject at the present day, and discuss the probability of their increase or diminution.

LAW TRIPOS—PART II.

ENGLISH LAW OF REAL AND PERSONAL PROPERTY (I).

THURSDAY, *May 29, 1890—9-12 a. m.*

1. Explain the policy and the effect of the statutes (a) *De Viris Religiosis*, (b) *De Denis Conditionalibus*, and (c) *Quia Emptores*.

2. Give a short account of the principal proceedings which have been in use from time to time for the recovery of lands.

3. Distinguish in respect of constitution and jurisdiction between the court leet, court baron, and customary court. What is the effect of an enfranchisement?

4. State the successive changes that have been effected by legislation in regard to (a) the power of devising lands and (b) the formalities requisite for a valid will.

5. What was the principal question at issue in *Shelley's case*? Do equitable and executory limitations come to any extent within the rule in that case?

6. What exceptions exist either at common law or by statute to the common-law rule that "every act of parties is void by which, if it were taken to be valid, the immediate freehold would be placed in abeyance"? To what extent is the rule applied to incorporeal hereditaments?

7. State the successive steps by which fee simple estates have become subject in the hands of the heir or devisee to the debts of the deceased owner.

8. When is an executor entitled to sell the real estate for the payment of debts and legacies? A testator possessed of two estates by his will charged them both with the payment of certain legacies and devised one directly to his son A and the other to trustees in trust for his son B. The two estates were sold by A and the trustees respectively to C, and A and B appropriated to their own use the whole of the purchase moneys, though without the knowledge of C. Is C responsible to the legatees?

9. What are the provisions of the third section of the statute of frauds? A is tenant from year to year of a farm belonging to B, whose estate agent is C. A and C with the knowledge of B agree by correspondence that A shall exchange his present farm for another, of which he is to have a lease for twenty-one years from B. A accordingly gives up possession of his farm, but B then for the first time dissents from the arrangement and refuses to allow A to enter on the new holding. What are the rights of A and B, respectively?

10. J. S. settles lands on his son A for life, remainder to the first and other sons of A successively in tail male, remainder to the right heirs of the settler, and appointed B and C to be protectors of the settlement. B died and C became insane. A's eldest son D executed a disentailing deed to which his father consented and was a party, and then executed a conveyance in fee of the land to one E. On A's death E entered into possession. He then died leaving a widow and a daughter aged thirteen, and his widow took possession of the land. To whom does the land belong and for what estates or interests?

ENGLISH LAW OF REAL AND PERSONAL PROPERTY (II).

THURSDAY, *May 29, 1890—1:30-4.30 p. m.*

1. Describe the several ways in which an easement may be created.

2. What covenants are by virtue of the conveying act of 1881 implied in a conveyance by way of mortgage of leasehold property by a person who conveys and is expressed to convey as beneficial owner?

3. How may a trust of personal estate be created? A, the lessee of a house at which he lives with his wife and son, indorses on the lease these words, "I give the within premises this day to my wife and son jointly," and subscribes his name and the date, and hands the lease to his wife. Shortly after he dies intestate. To whom do the premises belong?

4. What formalities are requisite to (1) an agreement to assign, and (2) an assignment of (a) consols, and (b) shares in a limited company? A having agreed to transfer certain stock to B fraudulently arranges with C to transfer them forthwith to him instead. What steps should B take to protect his interests?

5. What is meant by probate in common form? What is the practical importance of the attestation clause? A dies intestate, leaving a widow, a stepmother, a brother of the half blood, a child of a deceased brother, and a grandchild (whose parents are dead) of a deceased sister. An administrator is appointed, but before distribution dies, having made a will, but omitted to appoint an executor. Who are entitled and in what shares to the testator's personalty and by whom should it be distributed?

6. In what respects does a demonstrative legacy differ from a general and from a specific legacy? A owed B. £25. Subsequently by his will A bequeathed to B a legacy of £30 and died. Within three weeks of A's death B claims of A's executor the immediate payment of £55. Has the executor any answer to the claim or any part of it?

7. Distinguish between a legal and an equitable chose in action and between a legal and an equitable assignment of a chose in action. B owed A £100, and C owed B £50. B writes to A "I assign to you the £50 C owes me." B becomes bankrupt, and A then for the first time gives C notice (by letter) of the assignment. Who is entitled to the £50?

8. Define a fraudulent preference. A in 1885 is unable to pay his debts as they become due from his own money. Several of his creditors are suing him, and one of them, B, obtains judgment against him for £100. A, to prevent execution, pays to B in full satisfaction of his judgment the sum of £50, of which one-half is lent him for the purpose by a friend. Within a few days of this transaction A is adjudged bankrupt. B knew at the time that A was impecunious, but did not know that he was being sued by other creditors. Can any claim be sustained by the trustee against B or by B against the estate?

9. In 1885 a man and his wife join in a promissory note for £100, the wife having separate estate worth £50. The note is not paid at maturity, and the payee sues the makers. The wife has in the meanwhile parted with her separate estate, but other property worth £75 has been vested in trustees for her separate use, subject to restraint on anticipation; and this she is willing, if she can, to apply in satisfaction of her just debts. The husband has an equity of redemption worth £25. To what judgment is the plaintiff entitled, and by what means, if any, can he get it satisfied?

10. A leases to B for twenty-one years a tenement house occupied by weekly tenants, the lease containing the usual covenant for repair and proviso for reëntry, as well as a covenant for quiet enjoyment. B sublets to C for the residue of the term, less ten days. The house is not kept in repair, and in the middle of the term A serves on B a notice specifying the particular breaches of covenant complained of and claiming compensation, and at the expiration of three weeks, during which nothing is done, brings an action against the tenants in occupation for possession of the premises, and also joins B as codefendant. All the defendants allow judgment to go by default, and on A's demand the weekly tenants pay their rents to him. C then for the first time hears what has occurred. Advise C as to his position.

CRIMINAL LAW.

FRIDAY, May 30, 1890—9-12 a. m.

1. Give the main features of the English police system before the Conquest.
2. Trace the growth and decline of the criminal jurisdiction of the sheriff.
3. Explain and illustrate by two examples the effect of provocation in extenuating homicide.
4. A pays a debt by means of a check on a bank at which he says he has funds. As a matter of fact he has none and knows it, but has previously been permitted to

overdraw his account. The check is dishonored. Has A obtained property by false pretenses?

5. What light does Lord G. Gordon's case throw on the doctrine of "constructive treason"?

6. Under what circumstances does the conversion of lost goods by their finder constitute theft?

7. In what cases does the omission to do acts tending to the preservation of life involve penal consequences?

8. A householder buys a revolver for protection against burglars. Explain to him the circumstances under which he will be justified in using it for that purpose.

9. Enumerate briefly the successive steps of a criminal trial, from the swearing of the jury down to the sentence.

10. State in what cases a prisoner is now admissible as a witness on his own behalf; and discuss the desirability of rendering him so admissible in all cases.

11. A prisoner is indicted for knowingly uttering counterfeit coin. A policeman gives this evidence: "I found the prisoner in company with three men whom I knew. I arrested him. On searching him I found in his pocket this paper." The prosecuting counsel proposes (1) to put in the paper (which is a ticket of leave in the prisoner's name), and (2) to ask the characters and occupations of the three men (who are convicted coiners). May he do so?

12. State the law as to the admissibility of extrajudicial confessions. A constable deposes: "The prisoner's father saw me arrest him, and begged him to tell the truth. Next morning the prosecutor, Jones, came to the police station, and I said to prisoner, 'If you have anything to say to Mr. Jones you had better say it.' Prisoner then stated * * * ." Can the constable be allowed to give the statement?

ENGLISH LAW OF CONTRACT AND TORT. I.

FRIDAY, *May 30, 1890—1:30-4:30 p. m.*

1. Is a tortfeasor ever responsible in damages (a) for a wrong which produces no harm, or (b) for all the harm which his wrong produces, or (c) to an amount greater than the harm produced?

2. Explain the doctrine of common employment, and show briefly how it has been modified by the employers' liability act.

3. A advertises in the local newspaper "All fowls found trespassing in my garden will be shot." Afterwards on finding a hen of B's sitting there upon a nest of eggs he shoots her and places the eggs in his own incubator. Can B sue him for the value of the eggs and hen?

4. What is an assault, and how does it differ from a battery? Can the family of a man who has been killed in a prize fight recover damages from his antagonist?

5. A, when convicted at a police court of being drunk and incapable, falsely gives his name as "X, of No. 1 Strand, hatter." B, who has a hatter's shop near X's, hears from a policeman of X's conviction, and sends to C, the proprietor of a trade journal, an account of the case, and also a letter maliciously stating that X had been similarly convicted before (which was true, though B had no idea of it). C publishes both communications. Advise X as to his rights of action against A, B, and C.

6. What controversy was settled, and in what manner, by Fox's libel act of 1791? Has any analogous doubt arisen recently in actions for false imprisonment?

7. A ball being given at X's house, a carpet is laid by his upholsterer across the causeway and thence inside the railings to the hall doors. A, going along the street, trips over this and is hurt. In part of the carpet near the doorsteps there is a hole, and B, a guest, catches his foot in this and is injured, as also are, subsequently, C, the postman, and D, who is hiding in the garden to watch the arrivals. What do you consider to be X's liability?

8. R, when intoxicated, enters an inn, but is told by the barmaid, S, to go out, and on his refusal she pushes him out of the door. Owing to his intoxication, he can not recover his balance and falls down steps. The fall kills him. His only relative, an uncle, takes out administration and sues S's husband for damages. What can he recover?

9. A, on being pressed by B for payment of a debt, writes to him offering as a settlement some debentures of a company, which he assures him is prosperous. Next day A learns from his broker that the company is going into liquidation, and from B that he accepts the debentures. B shows A's letter to C, who, on the faith of it, buys the bonds from B. The company proves to be insolvent. A soon afterwards dies. Advise his executors as to their liability to B and C.

10. A baker opens a shop in a rural hamlet. The farmers, disliking his political influence, arrange to sell bread at cost price from their own kitchens to their respective laborers. The baker's weekly receipts fall to one-tenth of their previous average. Has he any remedies?

11. Explain briefly the following phrases: *Damnum sine injuria*; trespass on the case; trover; distress damage feasant; recaption; act of state; *judicium rusticum*.

ESSAYS.

SATURDAY, May 31, 1890—9-12 a. m.

Write an essay or essays on any of the following subjects, not attempting more than five out of the twelve:

1. The influence exercised on the early Roman law of property and inheritance by the primitive system of family worship.

2. The successive changes in the law of England with regard to the limitations of property which are commonly known as perpetuities.

3. The historical development of the English doctrine of consideration.

4. The history of the assignability of choses in action.

5. The contract of sale of chattels regarded as a conveyance of property.

6. Appeal (including new trial) in criminal cases: its expediency, proper scope, and the constitution of the court.

7. The registration of titles to land.

8. Draw a comparison between Federal Government in the United States and in Switzerland.

9. Describe the nature and working of the chief controlling agencies by which the colonial and imperial legislatures are kept in harmony.

10. Discuss the proper treatment of fraudulent bankruptcy by law:

(a) With reference to the objects which should be aimed at and the respective priority of such objects: *e. g.*, restitution to the injured; amendment of the offender; his incapacitation for the commission of similar offenses in the future; the deterrence of other persons likely to commit such offenses.

(b) With reference to the best means for attaining the above objects: *e. g.*, imprisonment, with or without degrading circumstances; liability of future earnings or means generally; repeated gazetting.

(c) With reference to such qualifications as should be made on account of age, sex, or position, and of the degree in which the so-called fraudulent conduct varies between negligence and design.

11. It may be assumed that voters at parliamentary elections are occasionally influenced by bribery in one form or another, by intimidation, by gross misrepresentation of facts, on the part or in the interest of candidates. How far are these methods at present regarded as criminal by the law of England, and how far do you think it expedient that they should be so regarded?

12. "Roman law begins and ends with a code." Explain and illustrate by any other instance this recurring tendency to codification. Compare the "call" of

Germany, in that direction, at the present time, with the similar "call" of the same country when Savigny wrote his "*Vom Beruf*," or of France when Napoleon compiled his code.

ENGLISH LAW OF CONTRACT AND TORT. II.

SATURDAY, *May 31, 1890—1:30-4:30 p m.*

1. Define a contract. Do you consider the words "contract" and "agreement" as synonymous? How do Pollock and Anson differ as to the relation between promises and contracts?
2. A wrote to a cattle-breeder, B, "I will buy your Jersey bull for £100, and if he is lucky at this year's shows I will at Christmas give you £10 pounds more, and buy another of your bulls." B replied "I accept your offer." What are B's present and prospective rights under this correspondence?
3. X wrote to the master of a college offering to sell his farm to the college for £5,000, but wrote again, next day, saying that he had now sold it to the mortgagee. This letter crossed one from the master, saying, "I accept the offer, and will report it at next week's college meeting." That meeting resolved that the college solicitor should write to X and hold him to his bargain. The solicitor requests your advice.
4. State the provisions of the infants' relief act, 1874. A, an infant, buys from B a horse, for which he pays £30; he also buys from C a gig, but on credit. The horse dies. A demands the return of the £30 and C demands the return of the gig. Are these demands enforceable?
5. A, meaning to act as agent for B, buys a reaping machine from C. Show in what cases (1) A only, (2) B only, (3) both A and B, will be liable to C for the price.
6. Write down the fourth and seventeenth sections of the statute of frauds. Explain the application of these provisions to agreements for the sale of chattels vegetable.
7. Compare the characteristics of contracts by specialty with those of other contracts.
8. A agreed with B to pay him £1,000 on trust for Mrs. A in consideration of her withdrawing her petition for a divorce. Next month A became bankrupt and C was appointed as trustee. A and C execute a deed whereby, in consideration of £500 paid by D to C, they assign to D the goodwill and plant of A's business, and A covenants to set up no similar business in the same street. Can this covenant be enforced against A, and can B prove against A's estate for the £1,000?
9. A, a widow, promises to marry B on condition that, within a month after the wedding day, he will settle his Welsh farm upon C, her only son. The marriage takes place, but B, at the advice of his father, D, refuses to settle the farm lest it should make C idle. Can C take any proceedings against B or D?
10. Show how an agreement is affected by the illegality of (a) one of the considerations, or (b) one of the promises, or (c) the condition of one of the promises set out in it. Give instances under each of these three heads.
11. Distinguish mistake from misrepresentation and from fraud. Show that the Queen's bench division does not now treat innocent misrepresentation as it was treated twenty years ago. A bankrupt trustee retains the probable amount of the solicitor's costs, and pays over the residue of the estate to the creditors. The costs, on being taxed, are found to exceed the amount retained. Can the trustee recover the excess from the creditors?

HISTORICAL TRIPOS.

ECONOMIC HISTORY OF ENGLAND.

[N. B.—Not more than eight or nine questions to be attempted.]

MONDAY, *May 26, 1890—9-12 a. m.*

1. Discuss how far Roman civilization in Britain had a direct influence on the agriculture and industry of the English.

2. Explain carefully the nature of the two-field and of the three-field systems. Distinguish them from extensive cultivation and from convertible husbandry.

3. Give some account of the origin of fairs and of the nature of the business done at them. Illustrate your answer from the history of any one English fair.

4. Examine the evidence adduced as to (a) the number of the population of England before the black death, and (b) the extent of its ravages?

5. Describe the Elizabethan legislation in regard to apprentices and wages, and discuss how far it was founded on regulations previously in force.

6. Give some account of the Hanse Towns and of their settlements in England.

7. What were the fiscal and commercial advantages of establishing staple towns? Why did Edward III order the staple for wool to be in England?

8. Explain the objects of the mercantile system, and the means adopted for attaining those objects. Contrast this system with the policy which is pursued in England in the present day.

9. What do you understand by capital? Compare modern with mediæval opinion as to the remuneration of capital.

10. What advantages arise from the use of money as compared with exchange by barter? Distinguish different kinds of money and discuss their respective advantages.

11. What have been the chief articles of export from and import into this country (a) during the Roman occupation; (b) under Edward I; (c) since the abolition of the corn laws?

12. Contrast the economic aims and results of trades unions with those of craft guilds.

ESSAYS ON ENGLISH HISTORY.

[N. B.—No candidate may write on more than two of the following subjects.]

MONDAY, *May 26, 1890—1:30-4:30 p. m.*

1. The Norse invasions and settlements in the British Isles.

2. Monasticism in England.

3. Chaucer and Langland as historical authorities.

4. Family connections as a political factor in the fourteenth and fifteenth centuries.

5. Military tactics and the art of fortification in the middle ages.

6. The union regal and parliamentary with Scotland.

7. The rise and progress of religious dissent in England during the seventeenth and eighteenth centuries.

8. The aims and work of Cornwallis and Wellesley in British India.

ENGLISH CONSTITUTIONAL HISTORY. I.

TUESDAY, *May 27, 1890—9-12 a. m.*

1. "De minoribus rebus principes consultant, de majoribus omnes." What else does Tacitus say about the primitive German assemblies? Examine the theories which connect this passage with the origin of the English Witan and folkmoot.

2. Sketch the Anglo-Saxon system of justice and police as it existed in the tenth century. What traces of family responsibility are to be found in it?

3. Trace the growth of the jury system during the two centuries after the Norman conquest, illustrating its various applications and explaining its constitutional importance. Who were the "jurati ad arma?"

4. Write a history of the office of sheriff to the end of Edward II's reign.

5. "In primis concessisse Deo et hac præsentī carta nostra confirmasse . . . quod Anglicana ecclesia libera sit, et habeat jura sua integra et libertates suas illasas." (M. Carta). What is meant by this clause? To what extent and in what respects were these liberties extended or curtailed during the next two centuries?

6. Compare the legislation of Henry II with that of Edward I with respect to the antifeudal tendencies of each.

7. "It is most probable, on the evidence of records, on the analogies of representative usage, and on the testimony of later facts, that the knights of the shire were [in the fourteenth century] elected by the full county court." Develop this statement. What light has recent investigation thrown on the mediæval system of election of parliamentary representatives?

8. "The authority of the star chamber, which before subsisted by the ancient common laws of the realm, was confirmed in certain cases by act of Parliament" (sc. by the act of 3 Henry VII). Discuss the theory stated by Bacon in this passage. What other acts of Parliament, besides the one alluded to, bear on the jurisdiction in question?

9. Translate and comment on the following passages, stating whence they are taken:

(a) *Speciali tamen plenitudine, si opus est, bis in anno convenient in hundredum suum quicunque liberi, tam heorthfest quam folgarii, ad dinoscendum scilicet inter cætera si decaniæ plenæ sint.*

(b) *Clerici rectati et accusati de quacunque re, summoniti a justitia regis veniant in curiam ipsius, responsuri ibidem de hoc unde videbitur curiæ regis quod ibidem sit respondendum, et in curiâ ecclesiastica unde videbitur quod ibidem sit respondendum . . . et si clericus convictus vel confessus fuerit, non debet de cetero eum ecclesia tueri.*

(c) *Habet enim [Scaccarium] hoc commune cum ipsa domini regis curia, in qua ipse in propria persona jura decernit, quod nec recordationi nec sententiæ in eâ latæ licet alicui contradicere. Huic autem curiæ tam insignis auctoritas est, tum propter regiæ imaginis excellentiam quæ in sigillo ejus de thesauro individua lege servatur, tum propter eos qui assident, ut dictum est, quorum solertia totius regni status indemnus servatur.*

(d) *Communia placita non sequantur curiam nostram sed teneantur in aliquo loco certo . . . Nullus vicecomes, constabularis, coronatores vel alii ballivi nostri teneant placita coronæ nostræ.*

(e) *Bons eschateurs seient mis. E ke il ne prengent rens des bens as morz, de queles teres deivent estre en la main le rei . . . Ne tailage ne autre chose ne prenge, fors si come il devera solum la chartre de franchise.*

(f) *E ausi avoms grante pur nous e pur nos heirs as ercevesques . . . e as autres gentz de seinte eglise, et as contes et barons et a tote la comunaulte de la terre, qe mes pur nule busoigne tieu manere des aides, mises, ne prises de nostre roiaume ne prendrons, fors qe par commun assent de tut le roiaume et a commun profit de mesme le roiaume, sauve les auzcienes aides et prises dues et custumees.*

POLITICAL SCIENCE.

[N. B.—Not more than eight or nine questions to be attempted.]

TUESDAY, May 27, 1890—1:30—4:30 p. m.

1. Show how far the views of Aristotle as to the origin of society are confirmed by recent investigators.

2. Discuss the importance of education as a function of the state in ancient and modern times.

3. In what various ways has feudalism arisen in Europe?

4. Compare the attitudes of modern and ancient states toward religious establishments.
5. What modern constitutional ideas may be traced to Roman origins
6. Show how the control of the public purse has affected the system of government in the different states of modern Europe.
7. Examine Bluntschli's criticisms of English political forms and ideals.
8. Discuss the contrasts pointed out by Bluntschli between a medieval and a modern state.
9. "Between the various classes of a modern state, the balance of property determines the balance of power." Discuss this proposition.
10. Show the main differences between the parliamentary government of Great Britain and the constitutional governments of France and the German Empire, respectively.
11. In what points does the socialism of any modern theorist differ from that discussed by the ancients?
12. What safeguards are adopted in modern states against the dangers of democracy, and with what success?

CONSTITUTIONAL HISTORY OF ENGLAND. II.

WEDNESDAY, May 28, 1890—9-12 a. m.

1. What points were in dispute between Charles I and his first three parliaments? How have any of those points been dealt with by subsequent legislation?
2. Describe in outline the several constitutions under which England was governed between the death of Charles I and the abdication of Richard Cromwell. What principles or institutions that have since been in vigor originated under the Commonwealth.
3. What effect has or had the demise of the Crown on the existence of Parliament by constitutional doctrine or by statute law? In what instances has there been some defect in the usual royal authority for holding a parliament, and how has the case been dealt with?
4. At the date of the act of settlement, what persons were nearer the throne in hereditary succession than the Princess Sophia? Describe and illustrate the part which English sovereigns have personally played since that date, whether by the exercise of legal prerogatives or by influence.
5. Trace the restraint or freedom of political writing from the beginning of the reign of Elizabeth to the present time, giving the most important enactments bearing on it either directly or indirectly.
6. Enumerate the privileges of Parliament under appropriate heads, both as now existing and as at any time claimed.
7. What conditions has it been necessary at different times that a member of Parliament should satisfy, as to connection with his constituency, property, or religious belief? Is any such condition necessary now, directly or indirectly?
8. Give a short account of the principal forms of municipal constitution in English boroughs, before and since the municipal reform act of William IV, and of the various franchises under which borough members of Parliament have been elected from the earliest times to the present.
9. Distinguish, giving examples of each, between Crown colonies, proprietary colonies, and colonies founded by simple emigration. What has been or is the relation of each class to the British Parliament in legal theory, in constitutional theory, and in practice? On what does it depend what criminal and private civil law prevails in a colony?

ESSAYS.

[Write an essay on one of the following subjects.]

WEDNESDAY, May 28, 1890—1:30–4:30 p. m.

1. The contribution made by chivalry to modern character and ethical doctrine.
2. *Vox populi vox Dei.*
3. The differences between the East and West in habits of thought and character and in institutions.
4. The political action of the modern press in Europe.
5. The abiding influences of race and speech, as shown in the religious divisions of Europe.
6. *L'État c'est moi.*

POLITICAL ECONOMY.

[N. B.—Not more than eight or nine questions to be attempted.]

THURSDAY, May 29, 1890—9–12 a. m.

1. Define wealth; enumerate the chief kinds or parts of national wealth and of individual wealth, and discuss how far national wealth coincides with the aggregate of the wealth of individual citizens.
2. By what economists have (a) high rents, (b) high profits, or (c) the balance of trade been used as criteria of national prosperity? Discuss how far any of them afford satisfactory means of measuring economic progress or decline.
3. Discuss, with illustrations from history, how far a rise of prices is beneficial to a nation.
4. Write a brief account of the controversy about the wages fund.
5. Explain what is meant by unproductive consumption, and show under what circumstances it is an economic evil.
6. State Ricardo's doctrine of rent, and discuss the question of its application to the variations of mediæval rents.
7. Enumerate the chief conditions that bring about a rapid increase of population. How far, according to Malthus, is such increase an evil?
8. What is meant by bimetallism? What difficulties are there in the way of introducing it?
9. Show precisely how the raising of the bank rate tends to affect the reserve in the Bank of England.
10. Distinguish different senses of "equality of taxation" and discuss whether a progressive income tax would be a good tax according to Adam Smith's four maxims.
11. On what different grounds has the imposition or maintenance of protective tariffs been advocated at different times? What arguments are used in favor of protection of manufactures (a) in the United States, (b) in Australia; and of protection of agriculture in Ireland? Would any of the arguments alleged in these cases hold good in the case of England?
12. Discuss how far capitalists (other than land-owners) in England at present monopolize the means of production so as to extort gain (a) from the laborer, (b) from the consumer.

GENERAL THEORY OF GOVERNMENT AND PRINCIPLES OF INTERNATIONAL LAW.

[Not more than four questions in each part to be attempted. Fold your answers to each part separately.]

A.

THURSDAY, May 29, 1890—1:30–4:30 p. m.

1. Define, according to Austin, "perfect legal obligations" and "imperfect legal obligations in the sense of the Roman jurists," including the definition of all terms which in the order of Austin's thought are to be first understood. What character

does he consider that religious and moral obligations possess in common with legal ones? In what sense does he use the term "duty."

2. Compare a representative democracy with monarchical, aristocratic, and bureaucratic governments, with respect to the political skill which each is likely to exhibit. Give examples.

3. State, as J. S. Mill gives them, the arguments for and against a second chamber, and on the best mode of composing one in England.

4. What conditions are necessary for the success of federal government, according to the various degrees of closeness which the federal tie may assume? Give examples. What provisions or means are there in the United States for enforcing obedience to Federal laws and judgments on the citizens of the several States.

5. Explain, with illustrations, "the separation of powers" and "administrative law," as those terms are understood in France. Has the theory which they involve ever been asserted in England?

6. How are the constitutions of England and the United States respectively related to law? Does any general character belong to the rules which in England are called constitutional?

B.

1. What conditions were necessary to be fulfilled in the European world before an international law such as now exists could arise in it? When did the European world begin to present such conditions? What sources antecedent to that time have contributed to modern international law?

2. Distinguish between complete recognition of a new state and recognition of belligerent rights. What conditions are necessary for these respective stages of recognition? Give examples.

3. How does a civilized state acquire title as against other civilized states, to territory inhabited by savage or barbarous peoples? What rules were laid down on that subject, and on the acquisition of protectorates over such peoples, by the African Conference of Berlin in 1885? And within what geographical limits were they declared to be applicable?

4. How is war usually commenced? From what point of time in the various cases which may be put do the legal consequences of a state of war run, (1) as between the belligerents; (2) as between belligerents and neutrals?

5. What rules or principles limit the destruction of enemy's property, public or private, (1) in places occupied by an invader; (2) in attacking places with a view to occupation; (3) apart from occupation or attack with a view to occupation?

6. What were the four points of the Declaration of Paris, 1856? State shortly how they differed from previous law, or were related to previous controversies about the law. What states have adhered to the Declaration? Is it open for a state which has adhered to the Declaration to withdraw from it?

ENGLAND UNDER ELIZABETH. I.

FRIDAY, May 30, 1890—9-12 a. m.

1. State the terms of the treaty of Edinburgh and explain the circumstances which rendered Mary unwilling to ratify it.

2. Describe the circumstances which led to the condemnation of the Duke of Norfolk.

3. Give some account of the changes which were made in the law of treason and the process for conviction of treason during the reign of Elizabeth.

4. What were the privileges of an ambassador as conceived in Elizabethan times? Illustrate from any incidents when their privileges were infringed either in England or abroad during this reign.

5. Explain the precise sense in which Elizabeth claimed supremacy in the Church, and show how the claim was regarded by the parties of Geneva and Rome, respectively.

6. Name the principal suitors for the hand of Elizabeth and discuss the political aims by which each was actuated.

7. Enumerate the chief cases where Elizabeth actively promoted disaffection among the subjects of foreign powers, and describe her methods and results.

8. Explain the precise attitude and action with regard to the toleration (1) of Romanists; (2) of Protestant nonconformists taken by (a) Elizabeth; (b) Parliament; (c) Convocation; (d) John Knox.

9. Discuss how the promulgation of the Bull against Elizabeth affected the different parties of Romanists in England.

ENGLAND UNDER ELIZABETH. II.

FRIDAY, May 30, 1890—1:30-4:30 p. m.

1. What are the sources of information drawn on by the compilers of the (a) Parliamentary History; (b) Harrison's Description? How far do you regard them as trustworthy?

2. Discuss the authenticity and genuineness of the casket letters.

3. "The assembly intreat Mr. Garway to move his lordship no farther to urge the employment of this gentleman (Sir E. Michelborne) and to give them leave to sort their business with men of their own quality, . . . lest the suspicion of the employment of gentlemen do drive a great number of the adventurers to withdraw their contributions." (Court records of the East India Company.)

Distinguish the different classes of society in Elizabeth's time, and explain why the East India merchants regarded the presence of gentlemen with alarm.

4. "Mr. Wiseman moved, "Three-pound land and under to pay 2s. 8d. in the pound, and five-pound goods and under to pay 1s. 8d. in the pound, and double tenths and fifteenths as soon as may be."

"Sir Robert Wroth, "That four-pound land full subsidy and six-pound goods full subsidy might be paid to her majesty."

"Sir Francis Hastings moved, "That three-pound men might be exempted and all others above that rate to pay according to the rate to make up a full subsidy."

"Mr. Philipps moved, "That the four-pound men might be exempted, and four-subsidies received from the rich, which should be termed a contribution because it might make no innovation."

Explain clearly the nature of each of these different proposals.

5. Give some account of the encouragement to literature and literary men which was afforded at Elizabeth's court.

6. (a) What were the chief inducements to undertake a plantation? (b) What were the chief obstacles to planting in Ireland? (c) Give some account of the experiment in Munster.

7. Draw a contrast between Cambridge life in the time of Elizabeth and at the present time, as to (1) hours, meals, and recreations; (2) subjects of study and modes of obtaining a degree.

8. Discuss how far the Elizabethan captains advanced the work of discovery or facilitated commerce by their expeditions.

9. "Hence the memory of Sir Thomas Smith is highly to be honoured for promoting the act in 18 Eliz. whereby it was provided That a third part of the rent upon leases made by colleges should be reserved in corn, payable either in kind or money after the rate of the best prices in Oxford or Cambridge markets on the next market day before Michaelmas and Lady Day. And tradition goes that the bill passed the Houses before they were sensible of the good consequences of it." (Kennet, *Parochial Antiquities*.)

Explain carefully how this measure benefited the college property.

REIGNS OF AUGUSTUS AND TIBERIUS. I.

SATURDAY, May 31, 1890—9-12 a. m.

1. Relate the life of M. Vipsanius Agrippa. How does Velleius Paterculus characterize him?

2. Give so much of the chronology of Augustus as will show his personal campaigns, journeys, and residences, and the offices and titles which he held. [The dates of all his consulships are not expected.]

3. Give some account of Roman religion in the time of Augustus, and of his efforts to restore religion. Trace the growth of the cults of the emperor and of Roma. During the reigns now under consideration, were divine honors ever paid to any living person except the emperor?

4. Pecuniam pro agris quos in consulatu meo quarto, et postea consulibus M. Crasso et Cn. Lentulo augure, adsignavi militibus solvi municipis. Ea summa sestertium circiter sexiens milliis fuit quam pro Italicis praedis numeravi, et circiter bis milliis et sescentis quod pro agris provincialibus solvi. Id primus et solus omnium qui deduxerunt colonias militum in Italia aut in provinciis ad memoriam ætatis meae feci. *Mon. Anc.* (spelling of the monument). Translate this. What were the dates of the consulships mentioned? In what provinces were the colonies referred to settled? What became of Antony's soldiers after the battle of Actium?

5. Describe the arrangements which Augustus made for the police and the other civic administration of Rome, and contrast them with the previous state of things.

6. Name the principal authors whose works, written under Augustus or Tiberius, have come down to us. In what relations did any of them stand to leading political personages? Compare the literature of the reign of Augustus with those of the periods immediately preceding and following.

7. Draw a map of Germany from the Meuse to the Elbe and from the Danube to the North Sea, showing the relative positions of the principal tribes and Roman stations. Over which tribes did Germanicus celebrate his triumph? Why was it, in your opinion, that the Romans did not permanently establish themselves as far as the Elbe?

8. Leges retractavit et quasdam ex integro sanxit, ut sumtuariam, de adulteriis et de pudicitia, de ambitu, de maritandis ordinibus. Hanc cum aliquanto severius quam ceteras emendasset, prae tumultu recusantium perferre non potuit, nisi adempta demum lenitate parte poenarum, et vacatione triennii data auctisque praemiis. Sic quoque abolitionem ejus publico spectaculo pertinaciter postulante equite, accitos Germanici liberos, receptosque partim ad se partim in patris gremium, ostentavit, manu vultuque significans ne gravarentur imitari juvenis exemplum. Cumque etiam immaturitate sponsarum et matrimoniorum crebra mutatione vim legis eludi sentiret, tempus sponsas habendi coarctavit, divortiis modum imposuit. (Suetonius, *Oct.*, c. 34.)

Ἦς δ' οὖν βρέθη τινὲς ἐγγνώμενοι τὰς μὲν τιμὰς τῶν γεγαμηκότων ἑκαρποῦντο τὸ δὲ ἔργον αὐτῶν οὐ παρέχοντο, προσέταξε μηδεμίαν ἐγγύην ἰσχύειν μεθ' ἣν οὐδὲ δυοῖν ἐτοῖν διελθόντων γαμήσει τις. τοῦτέστι δεκτὴν πάντως ἐγγυᾶσθαι τὸν γέ τι ὑπ' αὐτῆς ὑπολαύσονται. ὁ δὲ δεκά γὰρ ταῖς κόραις ἐς τὴν τοῦ γάμου ὥραν ἔτη πλήρη, καθάπερ εἶπον, νομίζεται. (Dio Cassius, *Hist. Rom.*, lib. 54, c. 16.)

Translate these passages. Mention any methods other than legislation which Augustus took for the improvement of morals.

THE REIGN OF CHARLES THE GREAT. I.

SATURDAY, May 31, 1890—9-12 a. m.

1. How far did Charles succeed in reviving the empire in the West.

2. What was Charles' policy toward the Mohammedan powers? How far was it successful?

3. What reforms in (a) the central (b) the local administration of his realm were devised and carried out by Charles?

4. Explain the political and religious position of the Gallican hierarchy during Charles' reign.
5. Note the characteristics of the Caroline revival of letters in Gaul.
6. In what ways did Charles attempt to bring the Saxons under his sovereignty and control? Compare his policy with that of English kings and Roman emperors toward similar foes.
7. How far were the political position and divisions of mediæval Germany a result of Charles' reign?
8. What characteristics of the legendary Charlemagne are to be found in the Charles of history?
9. "The Holy Roman empire is the creation of the Papacy." Criticise this remark.

EUROPE DURING THE REIGN OF FREDERICK THE GREAT. I.

SATURDAY, May 31, 1890—9-12 a. m.

1. What do you know of the steps by which Prussia had attained the position which she occupied in 1740? What were her relations with other powers and in what estimation was she held at the time of Frederick's accession?
2. Sketch the history of the first and second Silesian wars, showing (by maps, if possible) the position of the most important battlefields and of besieged towns. Where are Dettingen and Fontenoy, and what events brought English armies to those places?
3. What part was taken by Russia in the seven years' war, and why was not the assistance which she gave to Austria more efficient?
4. Examine the motives of French policy during the first twenty-three years of Frederick's reign, and account for its oscillations. What effect did it produce in Europe?
5. Frederick remarks, "*Le corps Germanique est puissant, si vous considérez ces rois, ces électeurs et la foule des souverains qui le composent; il est faible si vous arrêtez votre attention sur les intérêts différents et opposés les uns aux autres qui le divisent.*" Comment on the above, and give some account of the constitution of the Empire in the eighteenth century. How was it modified by the establishment of the Fürstenbund, and what was Frederick's policy with regard to that league?
6. Frederick has been called a forerunner of the French Revolution and of Napoleon. In what respect is this true of him? Can the same be said of any other sovereigns of his time, and to what extent?
7. State accurately (by means of a map, if possible) the portions of Poland acquired by the neighboring powers in the first partition. Was there any justification for the act? How was Turkey affected by it, and how did she show her interest?
8. Draw a contrast between French and German culture in the days of Frederick. Who were the chief literary figures in Europe during his reign, and what do you know of them?
9. (a) Give some account of the internal condition of France, or of Italy and Spain during this period. (b) "*L'Europe entière,*" says Voltaire, "*ne vit guère luire de plus beaux jours que depuis la paix d'Aix-la-Chapelle jusque vers l'an 1755.*" Discuss this statement.

REIGNS OF AUGUSTUS AND TIBERIUS.

SATURDAY, May 31, 1890—1:30-4:30.

1. What was the state of the imperial family at the death of Augustus? How was Tiberius named in the will of Augustus? What official positions did he then occupy? And in what further positions was he placed, and how, in order to complete his succession to Augustus?
2. What parts of the Roman Empire were in possession of the Roman franchise in the times of Augustus and Tiberius, either fully or with any restriction of the rights

conferred by it? Of whom were the *socii* and *auxilia* serving in the Roman armies composed? Are both of these classes met with during the reigns under consideration?

3. What are our original authorities for the reigns of Augustus and Tiberius? Which parts of these reigns are not covered by those authorities respectively, or by the extant portions of them? What authorities which have perished are known to have been in the hands of Tacitus and his contemporaries? How is the character of Tiberius treated by our extant authorities, respectively?

4. Relate the life of Agrippina. In what language does Tacitus describe her character?

5. *καὶ καὶ τοῦτον καὶ στρατηγοὶ καὶ δῆμαρχοι περιέσχον αὐτὸν ὥπως μὴ συνταράξῃ τι ἐκπηδήσας, ὅπερ πάντως ἂν ἐπεποιήκει εἰ κατ' ἀρχὴς ἄνθρωπὸν τινὶ ἀκούσματι ἐπέπληκτο. νῦν δὲ τό τε ἐλὲ ἀναγινωσκόμενον ὥς καὶ κυθφὸν καὶ μόνον ὃν παρορῶν, καὶ μάλιστα μὲν μηδὲν ἄλλο, εἰ δὲ μή, ᾗτοίγε καὶ ἀνῆκεσθαι τι ἐπεσάλλου περὶ αὐτοῦ ἐλπίζων, διετρίβῃ καὶ κατὰ χώραν ἔμεινε. καὶ τούτῳ προσκαλεσαμένου αὐτὸν τοῦ Ῥηγοῦλου οὐχ ὑπήκουσεν, οὐχ ὅτι ὑπερεφρόνησεν, ἤδη γὰρ ἔτεταπεινώτο, ἀλλ' ὅτι ἰσθῆς τοῦ προστάττεσθαι τι ἦν. ὥς δὲ καὶ δεῦτερον καὶ τρίτον γε ἐκείνον ἐμβόησας οἱ, καὶ τὴν χεῖρα ἡμᾶς ἐκτείνας, εἶπε "Σὴνὰν δέδρο ἔλθῃ," ἐπὶ πρώτῃσιν αὐτὸν αὐτὸ τοῦτο "ἐμὲ καλεῖς;" ὅψθ' ὃ οὐν ποτε ἀναστάντι αὐτῷ καὶ ὁ Λάκων ἐπεισελθὼν προσέειπεν. (Dio Cassius, Hist. Rom., lib. 58, c. 10.)*

Translate this. If Sejanus had gone out, where was it feared that he would betake himself? Who were Regulus and Laco? On which of our authorities does the statement rest that Sejanus had engaged in a conspiracy for the murder of Tiberius?

6. Relate the affairs of Armenia and of the Parthian Empire during the reigns under consideration, so far as they were connected with Rome.

7. What changes were made in the government of Judæa at the death of Herod the Great, and within a few years afterwards? During the reigns of Augustus and Tiberius what were the political condition and organization of the Jews, and their immunities, in different parts of the Empire other than Judæa, and what changes took place in the policy of the government with regard to them?

8. What do you know about the following persons: M. Æmilinus Lepidus (not the triumvir of that name), C. Asinius Gallus, L. Arruntius, Tacfarinas, Maroboduus, Julius Sacrovir?

THE REIGN OF CHARLES THE GREAT. II.

SATURDAY, May 31, 1890—1:33-4:30. p. m.

1. Translate and explain the following passages:

(1) In quibus ad aures uestrae regalis potentiae intimantes, innotescimus de Constantinopolitanae partibus: eo quad in finibus eius gens Persarum inuadentes atque depredantes uenerunt usque in loco quod dicitur Amoriam, sexagesimo milliario eiusdem ciuitatis Constantinopolitanae. Vnde et praedam magnam comprehendentes secum detulerunt. Et sicut audiuimus atque fama fertur thius regis Persarum princeps et dux exercitui nefandissimi ipsorum existerat. Qui dum reuersus fuisset cum iniqua uictoria, elatus in superbia mentitus est proprio nepote suo; et ab eiusdem exercitu factus est rex Persarum. Et infra Perse tumultuantes pugnare ad inuicem pro nepote et thio dicuntur.

(2) Illos uero procaces ac ereticos homines, qui tuam subuertere nituntur orthodoxam fidem et undique de coartantes angustias et uarias tempestates seminant, apostolico indutus precepto simulque apostolicis inbutus disciplinis seu saluberrimis orthodoxae fidei sanctorum patrum repletus institutis, eos, qui tuis noluerint amplectere recte fidei predicationibus, post unam et secundam admonitionem seu increpationem, tanquam ethnicos et puplicanos deputans, habeto pro nihilo eorum infruinitas insidias.

(3) Porro in ipsis regales apicibus uestris referebatur: quod Offa gentis Anglorum rex uestrae direxisset regali excellentiae significandum indiculum, ut aliqui emuli uestri ac sui ad nostra apostolica uestigia indicarent, quod idem Offa rex uobis sug-

gereret, ut per suam, scilicet ad hortationem atque suasionem nos a sede sancta dignitatis nostrae—quod absit—cieere deberemini et aliam ibidem de gente uestra institueremini rectorem: quod ualde nefandissimum ac contrarium in oculis uestrae apparuit scriptum: et hoc omnino falsum esse a uestra excellentia pro certissimae dinoscitur

- (4) Vnde decus regni factis et nomen amicis
 auxerat externis regibus et populis,
 ex quibus unus erat Hadefonsus nomino dictus
 qui rex Asturiae Galliciaeque fuit,
 qui, dum legatos et munera mitteret illi,
 mandabat dici se proprium Caroli.
 Scottorum reges ipsum dominum uocitabant
 ac se subiectos ipsius et famulos.

(5) Post susceptum imperiale nomen cum aduerteret multa legibus populi sui decesse—nam Franci duas habent leges in plurimis locis ualde diuersas—cogitauit quae decerant addere et discrepantia unire, praeu quoque ac perperam prolata corrigere. Sed de his nihil aliud ab eo factum est, nisi quod pauca capitula, et ea imperfecta legibus addidit. Omnium tamen nationum, quae sub eius dominatu erant, iura, quae scripta non erant, describere ac litteris mandari fecit. Item barbara et antiquissima earmina quibus ueterum regum actus et bella canebantur scripsit memoriae mandauit. Inchoauit et grammaticam patrii sermonis.

2. Give an account of the materials at the disposition of the Poeta Saxo and illustrate his use of them.

3. Show from the Capitularies the legal treatment of the Saxons by Charles. On what principles, religious and political, does it rest?

4. Sketch the state of land-tenure in Gaul in Charles's reign, as it is witnessed to by the Capitularies.

5. Not to be translated:

In Vesontio quae est diocesis Bernoini archiepiscopi, Heimonius episcopus et Mengaldus comes. In Mogontia quae est diocesis Heistulfi archiepiscopi idem Heistulfus episcopus et Ruodbertus comes. In Treuiris Hetti archiepiscopus et Adalbertus comes. In Colonia Hadaboldus archiepiscopus et Eemundus comes. In Remis Ebo archiepiscopus quando poterit, et quando ei non lienerit Ruothadus episcopus eius uice, et Hruotfridus comes sint super sex uidelicet comitatus, id est Remis, Catalonis, Suessionis, Siluanectis, Beluacis et Laudunum: super quatuor uero episcopatus qui ad eandem dioecesim pertinent id est Nouiomaecensem, Ambianensem, Taruanensem et Camaracensem, Ragnarius episcopus et Berengarius comes. Senones Hieronias archiepiscopus et Donatus comes. Rothomagum Willibertus archiepiscopus et Ingobertus comes. Turones Landramnus archiepiscopus et Hruodbertus comes. Lugdunum Tarantasia et Vienna Albericus episcopus et Rihhardus comes.

Identify the places in the above passage. Give an account (with sketch map if possible) of the *provinces ecclesiastical* under Charles's rule. At what date was this *commemoratio* issued?

6. Explain the terms pagenses, wargida, wadium, banga, haribannator, homo denarialis, homo cartularius, ad mallum legibus mannitus, marcha, centenarius, iudices, latro forbannitus.

7. Give some account of the plans of Charles for the future settlement of his realm. On what principles did such settlements rest?

8. Explain the manner and method by which laws and ordinances were made and issued under Charles.

9. What general provisions were made and maintained by Charles for (1) frontier defense, (2) general police, (3) control and punishment of eriminous clerks? Compare and contrast his regulations on these points with those of our Henry II.

EUROPE DURING THE REIGN OF FREDERICK THE GREAT. II.

SATURDAY, May 31, 1890—1:30—4:30 p. m.

1. Criticise and compare the respective value of the original authorities specified for this period. Enumerate the historical works of Frederick the Great, and state what you know of his manner of composition, and of the differences between the earlier and later editions.

2. State the reasons and justifications alleged by Frederick (a) for attacking Austria in 1740, (b) for making the peace of Breslau, (c) for taking the offensive in 1756. How far do you consider the reasons genuine and the justifications sufficient?

3. Can you illustrate from Frederick's works any of the peculiarities of his character, or his views on religion, philosophy and other subjects?

4. Translate and explain the following passages:

(a) "Le grand-duc fut élu le 13 de Septembre, au gré de la reine d'Hongrie et du roi d'Angleterre. C'était alors à savoir s'il me convenait mieux de reconnaître le nouvel empereur . . . ou de rompre entièrement en visière à ce prince, en déclarant que je reconnaitrais ni l'élection ni l'élu." What course did Frederick take on the occasion referred to?

(b) "Jamais campagne n'avait été plus féconde en révolutions subites de la fortune que celle que nous venons de décrire (sc. celle de 1757)." Describe these revolutions.

(c) "Sept années de guerre contre presque toutes les puissances de l'Europe avaient à peu près épuisé les finances de l'état: la Prusse, les provinces du Rhin et celle de la Westphalie, de même que l'Ostfrise n'ayant pu être défendues, étaient tombées au pouvoir des ennemis . . . tandis que la Poméranie, l'électorat et les confins de la Silésie étaient occupés pendant une partie de la campagne par les Russes, etc." What and where are the districts mentioned? What measures did Frederick take to relieve the finances and to obliterate the effects of the war?

5. Explain and comment on the following passages:

(a) "I am sorry I can not send your lordship a copy of the covenant and capitulation which His Prussian Majesty has made with the King of Poland, but the substance of them is . . ." (Mitchell to Holdernes, October, 1756.) Give the circumstances and terms of this capitulation.

(b) "His Prussian Majesty then made a comparison of the battle of Liegnitz with that of Rossbach." (Mitchell to Newcastle, August, 1760.)

(c) "As this is the last dispatch that it will fall to my share to write to you in quality of secretary of state, I think it necessary, and especially as Parliament is upon the point of breaking up without any grant of subsidy, as in the former years, to the King of Prussia, to enable you to justify the King's conduct from any misapprehensions or misrepresentations of what has passed in that affair . . ." (Bute to Mitchell, May, 1762.) Give the substance of Lord Bute's explanations.

6. Enumerate the chief negotiations in which Sir James Harris was concerned during this period. What light do his letters throw on the character of Catherine II, of the principal persons at her court, and of Russian politics in general?

7. Explain and comment on the following passages:

(a) "I am now to speak to you of the most material part of my instructions, to that most undoubted mark of His Majesty's friendship for Her Imperial Majesty, in offering to cede to her, on the most easy terms, the Island of Minorca." (Harris to Stormont, March, 1781.)

(b) "I should be glad to hear your sentiments on the demolition of the barrier towns." (Harris to Fitzherbert, May, 1782.)

(c) "The principal cause of my failure was attributable to the very awkward manner in which we replied to the famous neutral declaration of February, 1780." (Harris to Grantham, August, 1782.) What had been Sir J. Harris's advice regarding this matter?

8. Give the chief stipulations of the conventions of Klein-Schnellendorf and Kloster-Seven, and of the treaties of Breslau, Füssen, Versailles (1756), Hubertsburg, and Fontainebleau (1785).

9. Translate and comment on the following passages, stating from what treaties they are taken:

(a) "L'Ile de Minorque sera restituée à Sa Majesté Britannique, ainsi que le Fort St. Philippe, dans le même état où ils se sont trouvés lorsque la conquête en a été faite par les armes du Roi Très-Chrétien."

(b) "Sa Majesté l'Impératrice de toutes les Russies voulant par un effet de sa modération ôter jusqu'aux prétextes de désunion entre la Nation Polonoise, consent que dorénavant les Nobles Grecs-unis et Dissidens soient exclus du Sénat et du Ministère de la couronne et de Lithuanie."

(c) "Tous les peuples Tartares, ceux de la Crimée, du Budgiac, du Kuban, etc., . . . seront reconnus par les deux Empires pour nations libres et indépendantes."

(d) "Les hautes Puissances contractantes et médiatrices du présent Traité sont convenues de garantir à toute la Maison Palatine, et nommément à la ligne de Birkensfeld, les Traités et Pactes de Famille de 1766, 1774 et 1771 . . . ainsi que l'acte signé aujourd'hui entre le Sérénissime Electeur Palatin et M. le Duc des Deux-Ponts."

WHEWELL SCHOLARSHIPS.

HISTORY OF INTERNATIONAL LAW.

[You are only to attempt three questions in each part; and the answers in each part are to be folded into a separate bundle.]

TUESDAY, June 3, 1890—9-12 a. m.

PART I.

1. State fully the reasons for treating the peace of Westphalia as an important era in the history of international law.

2. State Wolf's views as to the source and limits of obligation between states. What has been their subsequent fortune? And how do they bear on the ascertainment of the rules of international law?

3. "The practice of a belligerent power prohibiting all trade with an enemy is of very ancient date." (Twiss.) Trace the steps by which such general prohibitions, as affecting neutrals, branched into the laws of blockade and contraband of war, and were limited to those branches.

4. Trace summarily the history of the title to territory by discovery. Can that title be still in any way appealed to, in any part of the world?

PART II.

1. Write a brief historical account of the *mare clausum* and *mare apertum* controversy. Are there any signs of a revival of it in the present day?

2. "One chief reason why, on the whole, naval usages are reasonable and humane is, that the belligerents were checked by the neutrals. In land wars a neutral can only affect proceedings to which he objects by taking part in the strife; but from the very first the belligerent maritime powers were prevented from going to the full lengths of predatory destructiveness by the authority of prize courts." (Maine.) Discuss this.

3. Trace the gradual growth of the various kinds of diplomatic representatives and point out the motives at work in the creation of fresh classes of such agents from time to time. What difficulties attended the attempt to classify them by international agreement, and how were these overcome?

4. Endeavor to estimate the effect produced upon the laws of war by the career of each of the following commanders: Marlborough, Frederick the Great, Napoleon.

FOREIGN RELATIONS.

TUESDAY, June 3, 1890—1:30-4:30 p. m.

1. What were the causes of the war of 1780 between England and Holland? How was Holland treated in that war by the powers of the armed neutrality? And what was its result to her?

2. Sketch the relations between the Christian powers and the Porte during the period of 1764-1815. Could it have been said at that time, as it was said in the treaty of Paris, 1856, that the Porte was admitted to the advantages of the European concert, and that violations of the integrity of the Ottoman Empire were questions of general interest?

3. Discuss the question whether Austria, Russia, and England, respectively, were guilty of provoking the war of the French Revolution by wrongful intervention or menace of intervention. What were the attitudes of the different parties in France towards that war down to the end of 1792?

4. Enumerate the new states which were set up by French arms during the republican and Napoleonic periods, and state out of what territories they were formed and what became of them.

5. What were the provisions of the treaty and convention of Bayonne, May, 1808, and the events and intrigues which led up to them?

6. Describe the currents of opinion and policy which divided Germany during the revolutionary and Napoleonic periods. How far did Napoleon avail himself of any of them? In what respects did the settlement of Germany in 1815 disappoint Stein?

7. What were the causes of the war of 1812 between England and the United States?

8. Compare the motives which determined the political grouping of the European states at the beginning and end of the period 1764-1815.

NOTE.—In question 3 for Russia read Prussia.

PRESENT RULES OF INTERNATIONAL LAW.

WEDNESDAY, June 4, 1890—9-12 a. m.

1. "Bulgaria is constituted an autonomous and tributary principality under the suzerainty of His Imperial Majesty the Sultan."—Treaty of Berlin, 1878. What authority or precedent is there for the interpretation of suzerainty? What rights have been recognized as belonging to Bulgaria under this clause? Do the capitulations between the Porte and the Christian powers, as to the status of the subjects of the latter, still apply in Bulgaria?

2. On what circumstances is jurisdiction in criminal matters deemed to be founded? What authority to punish foreigners for things done outside the territory is assumed by different states? The extradition of an accused person being claimed by different governments for the same fact, and the government of the territory in which he is found also claiming authority to try him for that fact, discuss the order of priority, as depending on the grounds of jurisdiction, in which those claims ought to stand.

3. What action outside its territory, in the nature of self-defense, is permitted to a state in time of peace? Relate the cases of the *Caroline* and of the *Virginius*, and discuss the right of the Spanish Government to try the crew of the latter by court-martial.

4. Can diplomatic agents claim any rights at the hands of governments to which they are not credited, whether enemy governments or those of third states? What cases have there been on the subject? What is the position of the member of a diplomatic mission who is a subject of the Government to which the mission is accredited? And what rights has that Government with regard to him?

5. On what circumstances does the enemy character of persons or property depend in the view of prize courts? Distinguish between domicile as understood in those courts and domicile as understood in private law, and mention any differences in the rules about it which result from the distinction?

6. According to the declaration drawn up at the Brussels conference of 1874, what are the conditions entitling voluntary combatants to the application of the laws of war in districts respectively occupied or not occupied by the enemy? And what test did the same declaration apply to such occupation? How far were the conditions so laid down in advance of previous practice? Has a private ship attacking an enemy's ship of war any analogous rights?

7. Do the penalties for carrying contraband of war apply to a neutral who carries it in order to assist the enemy in a war with a third power in which the neutral is his ally? What was the case of the *Commercen*, and what were the different judgments pronounced in it, and by whom?

8. A vessel captured by the enemy is taken into a neutral port, and her restitution is there decreed by the neutral jurisdiction on the ground of a violation of its neutrality in her capture. While lying in the neutral port she is condemned as good prize by the prize court of the captor's state, which takes a different view of the facts with regard to the alleged violation of neutrality. To whom ought the courts of a third state to regard her as belonging, in the different suppositions which may be put as to the order of dates in the action?

PRESENT RULES OF INTERNATIONAL LAW.

WEDNESDAY, June 4, 1890—1-4 p. m.

1. What is meant by the expression "the family of nations"? How may states gain admission into this family, and in what respects does their position after they have been received as members of it differ from their position before?

2. The plenipotentiaries assembled in conference at Vienna in 1815 declared with regard to the abolition of the slave trade that "they were animated with the sincere desire of concurring in the most prompt and effectual execution of this measure by all the means at their disposal." How far and by what means has their desire been fulfilled?

3. Explain the nature of reprisals, giving recent instances of their use, and showing how they differ from actual war.

4. Point out clearly the difference between the legal positions of a neutral mail steamer, carrying only duly certified mail-bags, and an ordinary neutral merchantman, whose captain has been induced by the known agent of one of the belligerents to carry a dispatch for him. What special indulgences have been granted to mail steamers in recent wars?

5. What remedy or remedies has a neutral state if the rules laid down by its government as to the stay of neutral vessels in its ports and the nature and extent of the supplies they may obtain therein are disregarded by a belligerent vessel?

6. Enumerate the various ways in which intercourse of a nonhostile character may take place between belligerents (*a*) under the ordinary rules of warfare, (*b*) by special permission from the commanders, (*c*) by special permission from the sovereign.

7. Embody in the form of instructions to naval officers what you deem to be the proper rules with regard to the protection of British subjects in foreign ports in case of disturbances in the social order of the districts where they reside.

8. Distinguish clearly between arbitration, mediation, and intervention, giving historical examples.

PROBLEMS, DISPUTED POINTS, AND PROPOSED CHANGES.

[You are only to attempt three questions in each part; and the answers in each part are to be folded into a separate bundle.]

THURSDAY, June 5, 1890—9-12 a. m.

PART I.

1. In what ways does it happen that there are persons whose national character is disputed, or who are not claimed by any state as its subjects? What are the bases on which you think it most probable that a general agreement might be obtained, obviating the inconveniences which arise from these causes?

2. Assuming that, by the negotiations between England and Russia in 1875-76, (1) England reserved her entire liberty of action with regard to Afghanistan in every case. (2) Russia agreed that Afghanistan should remain outside her sphere of action. (3) Both England and Russia reserved their entire liberty of action with regard to what they might, respectively, deem necessary for their security. Explain fully the rights and duties of England with regard to Afghanistan, and compare the position with that created by a protectorate under the general act of the African conference of Berlin.

3. Prof. Lueder says: "The laws of war permit such exercise of force as the object of war requires, and forbid its further and unnecessary exercise." Can any principle be maintained which would restrain the exercise of force in war within narrower limits than these? Discuss the measures, depending on the answer, which a hostile power might take against England.

4. State the practice and discuss the rightfulness of pacific blockades, (1) as between the blockaders and blockaded, (2) as between the blockaders and third powers.

PART II.

1. Endeavour to assign an exact meaning to the phrase "sphere of influence" as applied to a district not under the direct government of any civilized state, noting especially the relations established in respect of it (a) between the power which exercises influence over it and other civilized powers, and (b) between that power and the tribes who inhabit it.

2. There has been a tendency in recent wars of any importance for one or other of the belligerents to complain of the trade in contraband of war carried on by neutral merchants with its adversary, and to argue that such trade, when it takes place on a large scale, should be stopped by the neutral Government. State the rules of international law on this subject and discuss the advisability of altering them.

3. A public armed vessel is lying in a port of a friendly state. A member of the crew, seeing a political refugee chased in the streets, rescues him from a mixed mob of police, soldiers, and rabble, and brings him off to the ship. The local authorities immediately demand from the captain the surrender of the refugee and his rescuer. What course ought the captain to take?

4. Discuss the utility of international conferences regarded as a means of settling disputes without war.

POLITICAL PHILOSOPHY AND POLITICAL ECONOMY.

[Not more than three questions in each part of the paper should be answered.]

I.

THURSDAY, June 5, 1890—1:30-4:30 p.m.

1. "Constitutions are not made; they grow." Discuss the truth of this saying.

2. Does the influence exercised by great statesmen on the fate of nations increase or decrease in the course of modern history?

3. Assuming the general rules that men should be bound by law to fulfill their agreements and that states should be bound by international law to fulfill their treaties, discuss the exceptions to these rules, and consider how far the law of contract ought to be a model for the international law of treaties.

4. Discuss "the equal liberty of all" as a political ideal.

5. Propose a definition of "civilization" and examine the common belief that the existing civilized states are destined to become yet more civilized.

6. Illustrate the various methods of political science by arguing the question whether a democratic or a monarchical state is the more likely to pursue a consistent foreign policy.

II.

1. "Anything can be proved by statistics." Discuss this saying, and illustrate the use and abuse of statistics in economic argument.

2. "The best lands in Indiana are probably as fertile as the best lands in East Lothian, and yet they yield no surplus in the shape of rent to the proprietors; nor will they ever yield any unless inferior lands be taken into tillage."

Upon the above remark the following criticism has been made: "This is the Ricardian theory of rent pushed into sheer nonsense. Can any person believe that if, in any country, all land were of equal fertility, no rent would be exigible, but that in case a piece of land less fertile than that already existent were added or reclaimed, rent would immediately arise?"

Give your opinion as to the truth of the remark and the soundness of the criticism.

3. "But for war and the necessity of being prepared for war, all nations would long ago have adopted the principle of free trade." Criticise this statement.

4. State briefly the theory of international values.

5. Does it seem to you that political economy is at the present time a progressive science? In what directions and by what methods is it likely to make further progress?

6. "Labor, therefore, it appears evidently, is the only universal, as well as the only accurate measure of value, or the only standard by which we can compare the values of different commodities at all times and at all places."—(Adam Smith.) Discuss this passage.

X.—EXAMINATION FOR CALL TO THE BAR HELD IN THE INNS OF COURT IN LONDON, 1886.

The foregoing examination questions from Cambridge are used to secure academic degrees and prizes.

The following questions are asked by the inns of the court, the only official authority for admission to the bar in England. To the bar examinations all law students must submit, regardless of academic degrees acquired at universities. It is most interesting to compare these questions with the ones submitted in Cambridge. They reveal a difference in grade and character which is quite in harmony with the institutions from which they emanate. The answers to the questions on Roman law and common law have been prepared by W. D. Edwards, barrister at law; those on equity and real and personal property by A. D. Tyssen, barrister at law.

GENERAL EXAMINATION FOR CALL TO THE BAR HELD IN THE INNS OF COURT IN ENGLAND.

TRINITY EXAMINATION, 1886—SUBJECTS OF EXAMINATION.

GENERAL EXAMINATION.

The Law of Real and Personal Property.—The elementary principles of the law of real and personal property, and the settled land acts, with reference chiefly to the treatises of Mr. Joshua Williams and Mr. Goodeve on those subjects.

Equity.—(1) Trusts; (2) specific performance; (3) mortgages.

Common Law.—The elementary principles of (1) the law of contracts; (2) the law of torts; and (3) the criminal law, with reference chiefly to Mr. Broom's Commentaries, seventh edition, 1884; and (4) the procedure in the Queen's bench division of the high court of justice, with reference to Book 1 of the same work.

Roman Law.—Institutes of Justinian, Books I and II; Book III, title 13, to the end of the book; Book IV, titles 1 to 5, inclusive.

Examination for Studentships.—(1) Institutes of Gaius and Institutes of Justinian; (2) Digest: II, titles XIV, “De Pactis,” and XV, “De Transactionibus;” (3) history of Roman law; (4) principles of jurisprudence, with special reference to the writings of Bentham, Austin, and Maine; (5) elements of international law; (6) principles of private international law.

EXAMINATION PAPERS—WITH ANSWERS SUBJOINED TO EACH QUESTION.

REAL AND PERSONAL PROPERTY—PASS PAPER.

[Answer the questions concisely.]

Q. 1. Describe and distinguish the various kinds of conditional estates.

A. The expression “conditional estates” is not a recognized technical legal expression, but the words conditional and condition are used with a technical meaning in the following cases:

(1) At common law it came to be held that a gift to one and the heirs of his body, and some other similar expressions, gave to the donee a fee simple conditional, the condition being that if he had issue he could alienate the land in fee simple, but as long as he had no issue he could only alienate it for his life. This law was altered as to freehold lands by the statute *De donis conditionalibus*, which enacted in effect that such a gift should confer an estate tail in the future. But as to copyhold lands in manors, where there is no custom to entail, a surrender to the use of one and the heirs of his body still gives a customary fee simple conditional, with the power of alienation above mentioned.

(2) At common law it was lawful to make a grant or lease upon a condition, the effect of which was that if the condition was broken the grantor or his heirs might reënter upon the land and hold it discharged from the grant or lease. The examples of such grants given in Littleton are:

(a) A feoffment reserving a yearly rent with a power of reëntry in case of non-payment of the rent (Co. Litt., see. 325).

(b) A feoffment to one and his heirs with a condition that if the grantor paid the grantee a certain sum on a certain day he might reënter upon the lands. This was a primitive sort of mortgage, and the grantee was called tenant in mortgage (see. 332).

(c) A feoffment with a condition that if the lessee paid a certain sum to the lessor within a certain time he should have the fee, but otherwise only a term of years (see. 349).

(d) A feoffment on condition that the feoffee should, by another feoffment, settle the land on the feoffer and his wife and children. Directions of this nature are now generally held to be trusts, which may be enforced by the wife and children, and not conditions the breach of which gives the feoffer a right to reënter (see. 352).

(e) A grant of an office of steward or the like, which necessarily implies a condition that if the grantee do not fulfill the duties of the office he may be removed by the grantor (see. 378).

(f) A grant such as to husband and wife for their joint lives, in which case the estate of the survivor is determined by the death of the first (see. 380).

These last two cases are called conditions in law, because the condition is implied by the law from the nature of the grant.

(3) At common law also a future estate, in the nature of a remainder, might be made to depend upon the happening of some condition; and so long as the event was undecided, it was called a contingent remainder.

(4) In the case of conditions relating to the land contained in leases for years, the benefit of them has been extended to assigns of the reversion by the Stat. 32 Hen. VIII., c. 34.

(5) With respect to conditions annexed to freehold estates, the statutes of uses has had the effect of enabling land to be so limited as to give the land to any person on the happening of such a condition, instead of restricting the benefit of it to the grantor or his heirs; and the law is the same for devises by will, such being called executory devises.

Finally, therefore, we may divide conditional estates into—

A. Common-law estates liable to be defeated by a common-law condition, express or implied.

B. Estates limited by a grant to uses or a devise, so as to be liable to be defeated by a future springing or shifting use, or executory devise.

C. Customary conditional fees in manors where there is no custom to entail.

In these cases the condition is said to be subsequent to the estate.

D. The estate which may arise on the happening of a common-law condition annexed to a freehold estate.

E. A reversion in a lease for years, in so far as it may be enlarged under a power of reëntry in the lease.

F. A springing or shifting use or executory devise.

G. The interest left in the surrender or who has created a customary fee simple conditional, the same being called a customary possibility of reverter.

In the last four cases the condition is precedent to the estate.

Q. 2. State briefly the duties of an executor with respect to the administration of the testator's estate.

A. His duties are to pay all the testator's debts, to pay the legacies given by the will, and the legacy duties (if any) payable in respect of them, to pay all the costs of the administration, and to hand over the ultimate residue to the residuary legatee, paying, however, the legacy duty (if any) payable in respect of the same. On proving the will, he will have had to pay a sum for probate duty, which covers the duty on legacies to children and grandchildren. The reasonable expenses of the testator's funeral are payable by the executor in the first instance, in priority to all claims of creditors.

Q. 3. By what methods are mortgages of copyholds created, transferred, and discharged?

A. Mortgages of copyholds are usually created by a deed whereby the mortgagor covenants, amongst other things, to surrender the copyholds to the use of the mortgagee and his heirs, subject to a proviso making void the surrender on repayment of the mortgage money, with interest, at the end of six months. At the same time the mortgagor actually makes such a surrender, and it is duly entered on the court rolls; but in general the mortgagee remains unadmitted, so that no fine is payable. If it is desired to transfer such a mortgage to another mortgagee, two courses are open. Either the mortgagor must execute a new surrender to the new mortgagee, and the old surrender must be vacated; or the first mortgagee must be admitted on the old surrender, and execute a new surrender to the new mortgagee. If a mortgage is discharged, and there has been no transfer of it, the surrender can be vacated by the steward of the manor entering satisfaction upon it, by direction of the mortgagee. The same can be done if a transfer has been made in the first way above mentioned. But if a transfer had been made in the second way above mentioned, a further difficulty would occur; inasmuch as an entry of satisfaction on the last surrender would leave the original mortgagee tenant upon the rolls. It would be necessary, therefore, for the ultimate mortgagee to be admitted and surrender to the use of the mortgagor, and then for the mortgagee to be admitted. Of course a deed of mortgage of copyholds includes covenants for payment of the principal and interest, and the benefit of these covenants is assigned to any transferee. (Wms. R. P., Pt. 4, c. 2.)

Q. 4. Explain the different effects of executing a contract for sale in the case of real estate and personal chattels, respectively.

A. As to real estate, the effect of executing a contract for sale is that either party may compel the other specifically to perform it. The purchaser may compel the vendor to convey the property, on payment of the purchase money, and the vendor may compel the purchaser to pay the money, and accept a conveyance of the property.

As to personal chattels, several distinctions arise. It may sometimes be necessary to inquire whether the chattels have been appropriated for the purchaser with his consent. If so, there has been a sale; if not, there has been only a contract to sell. If there has been an actual sale, and the goods are unique, such as an antique curiosity, not procurable in the open market, then the case resembles a sale of land, and the purchaser may compel a specific delivery of the article. Indeed, the theory of the law is, that when a contract for sale is duly executed and the article is appropriated for the purchaser with his consent, the legal property in the article, corresponding to the legal estate in land, vests at once in the purchaser, subject to the vendor's lien for any purchase money remaining unpaid. In all such cases, therefore, the court has a discretion to order specific delivery of the article; and the seller can sue for the whole price, he tendering the article on payment thereof. But when the article has not been appropriated for the purchaser with his consent, each party can only sue for such damage as he may sustain. That is to say, the vendor can only sue for the excess of the price agreed to by the purchaser, over the price at which he can sell the like goods in the market; and the purchaser can only sue for the excess of the price he has to pay in the market over the price at which the seller agreed to supply the goods. In the former case interest on the purchase money, and the latter case damages for delay in procuring the goods may also be claimed, and would ordinarily be awarded.

Even when personal chattels are appropriated for the purchaser with his consent, and the vendor omits to deliver them, the court usually grants damages on the principle above mentioned if the goods are such as can be readily procured in the market. (Wms. P. P., Pt. 1, c. 3.)

Q. 5. Enumerate and classify the different kinds of powers for sale.

A. The principal instances of powers of sale are the following:

(1) A power of sale in a mortgage. In this case the legal estate is usually vested in the mortgagee, and would pass to any purchaser from him without any power. But the power is required to destroy the mortgagor's equity of redemption, and give to the purchaser the complete beneficial interest in the property. A statutory power of sale is now annexed to every mortgage which is made by deed; and this statutory power is, in other respects, the same in kind as an express power in the deed.

(2) A power of sale in a settlement. Such a power is usually given to trustees, who take no estate whatever in the land. It is a power to appoint the legal estate in the land to a purchaser under the statute of uses, and revoke or supersede the uses and trusts of the settlement with respect to the land sold.

(3) A power to sell land to pay debts, given to executors or trustees expressly by a will, or impliedly by means of a charge of debts upon the land. Here again the donees of the power take no estate in the land, but have power on a sale to appoint the land to a purchaser.

(4) The power possessed by the court to sell the land of a deceased debtor to pay his debts, when he has not given any person or persons the power so to do.

(5) The power given by the settled land act to a tenant for life to sell and convey settled land on payment of the purchase money to trustees or into court. Here the tenant for life usually has a legal estate for life, and to that extent he could convey the legal estate without any power; but the act authorizes him to convey the whole fee, so far as it is comprised in the settlement.

Q. 6. Explain the meaning of these terms: Franchise, copyright, and tenant-right.

A. The word franchise is used in ordinary language to indicate a right of voting; but in legal language it also means a privilege of the Crown, which has been granted

to a subject, or has been enjoyed so long that a Crown grant may be presumed. The most important franchises which are found to exist are, rights of forest and fisheries, rights to hold markets, to levy tolls, to take waifs and strays. (Smith, R. and P. P., 3d ed., 53.)

Copyright is the right to multiply copies of a book, picture, or design; and the word has been extended to dramatic copyright, or the right to act a play, and musical copyright, or the right to play a piece of music. All these rights are recognized by law.

There are some manors, in which the custom exists to grant copyholds for lives only, usually three lives; with a further custom whereby on the dropping of the lives, the person beneficially entitled to the copyhold tenement may require a fresh grant for new lives, he paying a customary fine. The person paying the fine takes the beneficial interest in such copyholds; and the grantees named in the grant are held to be trustees for him. These are called tenant-right estates. (Smith, R. and P. P., 3d ed., 122.)

The word tenant-right is more usually understood to mean a right which has been conferred on tenants occupying lands in Ireland, whereby as long as they pay their rents and perform their covenants, they can not be evicted without being paid compensation.

Q. 7. How far is it correct to say that a man can not legally convey to himself?

A. The common-law rule was and is that a man could not by feoffment, grant, or deed of assignment convey freehold or leasehold estates to himself for any interest. The difficulty thus presented was got over in the case of freeholds by the statute of uses; the effect of which was that a man could express to convey freeholds to a person named, as a conduit pipe, to the use of himself for any estate or interest, either solely or together with any other person or persons.

A further inroad into the old rule has been made by the conveyancing act, 1881, which enacts, by s. 50—

“Freehold land or a thing in action may be conveyed by a person to himself jointly with another person, by the like means by which it might be conveyed by him to another person.”

This provision still leaves it necessary to introduce a grantee to uses, whenever a man seized in fee desires to settle land on himself for life with remainders over.

In the case of leaseholds, formerly, on every appointment of new trustees, when any one or more of the old trustees continued to act, it was necessary for the old trustees to assign the leaseholds to a provisional trustee on trust to reassign them to new set of trustees; and such reassignment was executed immediately afterwards. The necessity of this double assignment was obviated by section 21 of Lord St. Leonards' act, 22 and 23 Vict., c. 35, which enacts—

“Any person shall have power to assign personal property, now by law assignable, including chattels real, directly to himself and another person or other persons or corporation, by the like means as he might assign the same to another.”

It appears, therefore, that it is still correct to say that a man can not legally convey to himself alone. Possibly it might be held under the conveyancing act that a man can not convey to himself and another as tenants in common, but that would be putting a narrow construction on the word “jointly.”

Q. 8. What provisions are made in the settled land act, 1882, with respect to the property of infants and married women?

A. The settled land act, 1882, provides by section 59, that—

“Where a person who is in his own right seized of or entitled in possession to land is an infant, then for the purposes of this act the land is settled land, and the infant shall be deemed tenant for life thereof.”

The next section provides that the powers of the act may be exercised on behalf of the infant by the trustees of the settlement, and if there be none, then by such person and in such manner as the court may order.

The sixty-first section deals with the case of a married woman. If a tenant for life is a married woman entitled for her separate use, she alone has the powers of a tenant for life; and a restraint on anticipation does not affect the powers. Where a tenant for life is a married woman not entitled for her separate use, she and her husband together have the powers of a tenant for life.

Q. 9. Describe the legal nature and incidents of personal annuities?

A. When one person by deed purports to bind himself to pay to another a certain sum per annum without charging the payment of the same upon any land, the series of payments so to be made is called a personal annuity. Such an annuity may be limited to the grantee for a term of years or for life, or to the grantee and the heirs of his body, or to the grantee and his heirs. It was held in early times that a personal annuity limited to one and his assigns might be assigned by the grantee so that the assignee might sue in his own name; and the same result was arrived at when the assigns were not mentioned in the original limitation. These decisions took personal annuities out of the general class of choses in action.

A personal annuity limited to the heirs of the grantee descends on intestacy to his heir-at-law. A personal annuity limited to one and the heirs of his body confers on the grantee a sort of fee simple conditional, which he can not aliene for more than his own life, so long as he has no issue, but can aliene to another and his heirs general, as soon as he has issue born. (Wms. P. P., Pt. 3, c. 1.)

Q. 10. State and explain the provisions of the conveyancing and law of property act, 1881, with respect to the redemption of perpetual charges on land and the discharge of incumbrances on sale.

A. The fifth section of the conveyancing act, 1881, provides as follows:

“(1) Where land subject to any incumbrance, whether immediately payable or not, is sold by the court, or out of court, the court may, if it thinks fit, on the application of any party to the sale, direct or allow payment into court, (a) in case of an annual sum charged on the land, or (b) of a capital sum charged on a determinable interest in the land—of such amount as, when invested in Government securities, the court considers will be sufficient, by means of the dividends thereof, to to keep down or otherwise provide for that charge—and (c) in any other case of capital money charged on the land—of the amount sufficient to meet the incumbrance and any interest due thereon.”

A further sum is to be paid in to answer costs; and the court can then declare the land free from the incumbrance, give effect to the sale, and administer the sum paid in.

EQUITY—PASS PAPER.

Q. 1. Where trustees are expressly required by the terms of their trust to invest the trust money in the public funds, and, instead of so doing, they retain it in their hands, what are the rights of the *cestui que trust* against the trustees in respect of the money so retained by them; and is there any, and, if any, what, difference in the liability of the trustees (1) where there is also an express trust for accumulation, and (2) where they are directed to invest on Government or real securities?

A. Where trustees are required to invest money in the funds and omit to do so the beneficiaries have the option to make the trustees account for the money and interest at 4 per cent, or for the funds which might have been bought and the dividends which would have accrued upon them. (Lewin, c. xiv., s. 4, § 44.)

If there is also an express trust to accumulate, the trustee will be considered as having lent the money and interest to himself, and will be chargeable with compound interest accordingly. (Lewin, c. xiv., s. 5, § 17.)

Where trustees are directed to invest in Government or real securities and omit to do either they are chargeable with the amount of the money and interest. The beneficiaries have no option in this case. (Lewin, c. xiv, s. 4, § 45.)

Q. 2. On what securities, not expressly forbidden by the terms of their trusts, can

trustees lawfully invest trust money; and is there any, and what, limit to such power of investment?

A. Trustees, when not expressly forbidden by the terms of their trust, may invest trust money on any of the following securities:

(a) Originally allowed by the court of chancery: Consols, and new and reduced annuities.

(b) By act 22 and 23 Vict., c. 35, s. 32: Real securities in any part of the United Kingdom, stock of the Banks of England and Ireland, and East India stock.

(c) By act 23 and 24 Vict., c. 38, s. 12, and an order of the court of chancery issued under it, dated February 1, 1861: Bank stock, East India stock, exchequer bills, the $2\frac{1}{2}$ per cent annuities, and mortgages of freeholds and copyholds in England and Wales.

(d) By act 30 and 31 Vict., c. 132: East India stock created after the act of 22 and 23 Vict., c. 35, and any securities the interest on which shall be guaranteed by Parliament.

(e) By act 34 and 35 Vict., c. 47, s. 13: Metropolitan consols.

In lending on mortgage the power of trustees is limited by the rule that they should act as a prudent man would act with respect to his own money. (*Ante*, Vol. VII., pp. 144, 145.)

Q. 3. Are there any exceptions to the general rule that a trustee is not to be held liable for the acts or defaults of a cotrustee in which he has not participated? If so, give some examples by way of illustration.

A. The rule is controlled by another rule, namely, that one trustee should never let any of the capital of the trust property come under the sole control of his cotrustee; and if any capital should ever so come, it is the duty of the first-mentioned trustee to see at once that it is properly invested. If a trustee omits to perform these duties he becomes liable for any loss occasioned by the acts of his cotrustee. The case of income is different from capital, because in general any one of several joint owners can give a receipt for the whole of it. Every trustee, however, is liable to see to the proper application of income, which, as a matter of fact, does come under his control, and if he puts any such income under the sole control of a cotrustee he will be liable for the loss of it. (Snell, 147, Pt. II, c. 6.)

Example: Trustees sell land properly and receive the purchase money in notes, which one puts in his pocket. There is not time to pay the money into a bank that day, and the trustee who has the notes absconds with them that evening. The next day the other trustee calls at his house to see after the money, is unable to find him, and instructs a solicitor at once to take proceedings, but the money is lost. The innocent trustee is not liable; but he would have been liable if he had left the money in the hands of the cotrustees for a length of time and it had got mixed with the general money of the latter and had been spent and so lost.

Q. 4. Assuming the existence of a contract binding in equity—(1) In what classes of cases will the court decree specific performance? and (2) in what classes of cases will it refuse to interfere? Give examples of each class.

A. In order that a decree for specific performance may be obtained, it is necessary that the contract should be one in which (1) damages would not be an adequate compensation for the breach of the contract; (2) the court could insure the proper performance of the contract; and (3) the performance would not entail any special hardship on the defendant. Conversely, the court will not decree specific performance in the three classes of cases in which, respectively, (1) damages are an adequate compensation; (2) the court can not insure proper performance; and (3) performance will entail some special hardship on the defendant.

Examples: (1) Damages are a sufficient compensation for default in supplying goods which can be bought in the market; but they are insufficient compensation for default in conveying a strip of land near the purchaser's house, or a picture by a celebrated artist.

(2) The court can insure the proper performance of the delivery of an article or conveyance of a plot of land, but it can not insure the proper performance of an agreement to sing a song or to become another's partner.

(3) When a purchaser by his own negligence bid for a lot at an auction when he intended to buy another lot, the court refused to enforce performance against him. (Snell, Pt. III, c. 9.)

Q. 5. Are there any exceptions to the general rule that the court will not compel specific performance of part of a contract unless it can execute the whole of it? Give an example of a divisible contract which the court will decree to be specifically performed, and of an indivisible contract which the court will not specifically perform.

A. There are exceptions, but they do not appear to be referable to any clear principle. In *Lumley v. Wagner* (1 De G. M. & G., 604), under an agreement to sing at one theater and nowhere else during three months, the court granted an injunction against singing elsewhere.

In *Donnell v. Bennett* (2 C. D., 835), where the defendant agreed to sell all his fish refuse to the plaintiff and to no other manufacturer, Fry, J., granted an injunction against a breach of the latter clause, saying that the authorities appeared to establish that an injunction might be granted where there was an express negative clause which was separable from the rest of the agreement.

In *Sticker v. Wedderburn* (3 K. & J., 393), the court refused to grant specific performance of a contract by promoters of a company to purchase a patent, when the contract stipulated that the vendor should give his services to the company for two years, on the ground that the court could not see to the proper performance of the last mentioned stipulation. (*Ante*, Vol. v, p. 22; Vol. II, 121; Fry on Specific Performance, c. 15; Kerr on Injunctions, c. 22, s. 1.)

Q. 6. Are there any exceptions to the general rule that equity will not decree specific performance of contracts as to personal chattels or personal acts? If so, give instances and state the grounds on which the jurisdiction in such cases is based.

A. As to personal chattels, the general rule is based on the principle that in general one chattel can be made just like another; and therefore it will be sufficient compensation for nondelivery of a chattel to order payment of the cost of getting another together with any loss caused by the delay. If this reason ceases, the law ceases also; and it is established, therefore, that the court will order delivery of articles of special value, like a picture by a celebrated artist, the loss of which can not be adequately supplied by another. It has also been held that the court would order the delivery of ships to a charterer, but not their conveyance to a purchaser; the assignment of interests in personal estate uncertain in their amount or in the time of their payment; the assignment of patents; the delivery of title deeds; the transfer of shares in small companies, which could not be bought in the market; and the court will order a purchaser to accept shares, which are unmarketable by reason of a liability attached to them. (Snell, Pt. III, c. 9; *ante*, Vol. III, pp. 265-267.)

As to personal acts, the court in general refuses to order their performance on the ground that it can not insure their proper performance. The court has, however, ordered a railway company to make a siding, according to its contract (*Lytton v. Great Northern Railway Co.*, 2 K. & J., 394); and other cases have occurred in which a covenantor has been ordered to do work upon his own land according to his contract. (See *Wilson v. Furness Railway Co.*, L. R. 9 Eq., 28; *Greene v. West Cheshire Railway Co.*, L. R. 13 Eq., 44; *Firth v. Midland Railway Co.*, L. R. 20 Eq., 100; and *Cooke v. Chilcott*, 3 C. D. 694, which last mentioned has been overruled on other points by *Haywood v. Brunswick Permanent Building Society*, 8 Q. B. D., 403; and *Austerberry v. Corporation of Oldham*, 29 C. D., 750. See also specific performance refused in *Wilson v. Northampton, etc., Railway Co.*, L. R. 9 Ch., 279; and compare *Powell, etc., Co. v. Taff Vale Railway Co.*, *ibid*, 331.)

Q. 7. Where a vendor is able to perform his contract in its substance, but can not perform it literally in all its parts, can he, in the absence of any condition or stipu-

lation on the subject, compel the purchaser, or be compelled by him, to perform the contract so far as he is able; and, if so, on what terms or conditions in each case?

A. The general rule is that the vender can not compel the purchaser to take the property unless he can make a title to every part according to the contract, and according to the description of the property contained in the contract. Cases have occurred, however, in which a defect in the title of a small immaterial portion, or a deficiency in the acreage of some part, has been held not to be fatal; and the purchaser has been compelled to take the property with an abatement in respect of the faulty part.

On the other hand, the general rule is that if the vender can not make a title according to the contract the purchaser may compel him to sell such interest as he has, with a reduction in the purchase money as compensation for the deficiency. But the court will refuse this if it would entail special hardship on the vender or prejudice the position of others. (Snell, Pt. III, c. 9.)

Q. 8. What is the difference between the doctrine of the consolidation of securities and tacking? Give an example of each, and state on what principles they respectively rest.

A. The consolidation of mortgages is a name given to a right formerly accorded to all mortgagees, namely, that when a mortgagee held two securities for two debts due from the same mortgager, he might refuse to allow one of them to be redeemed separately from the other. It was said to rest on the principle that he who would have equity must do equity. If the mortgager desired to exercise his equitable right of redeeming one property he was bound to perform the equitable act of paying the other debt also.

Tacking was a name given to another right—namely, that if a mortgagee held a legal mortgage on certain property, and he had also made another advance of money on security of the same property, without having notice of any other puisne incumbrance, he was allowed to tack his further advance to his legal mortgage, in priority to any other puisne incumbrance which happened to exist. This was said to depend upon the principle that where equities were equal the law should prevail. The two puisne incumbrances were considered as having equal equities though one was later in time than the other. (Snell, Pt. II, c. 16.)

Q. 9. What is requisite to the validity against the mortgager's trustee in bankruptcy of (1) a mortgage of a ship or of shares in a ship; (2) of a bill of sale of personal chattels under the bills of sale act, 1882; (3) of legal debts; (4) of funds of the mortgager in the hands of a third person; and (5) of funds in court standing to the credit of a cause?

A. (1) As to a ship, or a share in a ship, the merchant shipping acts provide for the registration of the ownership of every British ship, and the registration of every mortgage or assignment of the same. Mortgages rank in the order of their registration, and notice of a prior unregistered mortgage has no effect. The acts also provide a form of mortgage, and direct every mortgage to be made in the form so provided, or as near thereto as the circumstances admit. Nevertheless, it may be doubted whether an unregistered mortgage is not good against the trustee in bankruptcy of the mortgager. Equities may be enforced against the registered owners of ships, and the trustee in bankruptcy stands, in general, in the same position as the bankrupt. He takes only what the bankrupt is entitled to, and takes the bankrupt's property subject to all equities affecting it. In certain cases his rights are extended by the reputed ownership clause, which has been introduced into all bankruptcy acts, but, in default of any special statutory enactment, the trustee in bankruptcy stands only in the shoes of the bankrupt, and does not rank as a purchaser for value from him. (Wms. P. P., Pt. I, c. 4.)

(2) The bills of sale act, 1882, only applies to bills of sale thereafter given as security for money. As to such bills, the goods comprised therein pass to the trustee in bankruptcy of the borrower, under the reputed ownership clause, if they remain

in the possession of the bankrupt. See *Swift v. Pannell* (24 C. D., 210), in which it was held that other bills of sale, if duly made and registered, are still good against a trustee in bankruptcy claiming under the reputed ownership clause. (Bankruptcy act, 1883, s. 44, § (iii).)

A bill of sale under the act of 1882 is also void as to the chattels comprised therein, unless it is duly attested and registered under the act of 1878 within seven days, and unless it states truly the consideration for which it was given (s. 8). It is also void altogether unless made in the form given in the schedule to the act (s. 9). It is also void altogether if given in consideration of a sum less than £30.

(3) As to legal debts. The bankruptcy act, 1883, s. 44, § (iii), provides that things in action other than debts due or growing due to the bankrupt in the course of his trade or business shall not be deemed goods within the meaning of the section.

The result of this clause appears to be that a mortgage of a debt due to the bankrupt in the course of his trade will be void, unless notice thereof has been given to the debtor before the commencement of the bankruptcy, so as to take it out of the reputed ownership of the bankrupt. But a mortgage of any other kind of debt would be good without any such notice. Moreover, there does not appear to be any statute or rule of law requiring writing or any formality for a mortgage of any legal debt, but it would be very unwise ever to dispense with a written assignment in such a case; and a power to sue in the name of the assigner should be added, as the case is not covered by the judicature act, 1873, s. 25, § 6. But under an assignment of a debt on trust to get it in, retain a certain sum, and pay the surplus to the assigner the assignee may sue in his own name. (See *Burlinson v. Hall*, 12 Q. B. D., 347.)

(4) Funds of the mortgagee in the hands of a third person. Such funds, when so circumstanced as not to give rise to a legal debt, confer an equitable right of action on the owner. The case then comes under the 9th section of the statute of frauds, which requires writing and the signature of the assignor for the assignment of every equitable interest. The assignee of an equitable right could always sue in his own name for such relief as he was entitled to. Such an assignee is bound to give notice to the party liable in order to protect himself against any subsequent purchaser; but notice does not appear to be necessary as against a trustee in bankruptcy of the assignor. It is clear, however, in these cases, both as to legal and equitable claims, that if an assignee omitted to give notice, the party liable would be discharged by payment to the trustee in bankruptcy as he would by payment to the bankrupt himself before bankruptcy, and it might perhaps be held that the security was thereby lost. (See *Re Bright's Settlement* (13 C. D., 413), and *Palmer v. Locke* (18 C. D., 381).)

(5) As to funds in court standing to the credit of a cause, an interest in such funds is included in the general term equitable rights, and what we have said above respecting equitable rights applies to such a case. The mode of giving notice to the court is, however, putting a stop order on the funds. This does not appear to be essential in order to establish the title; but, in the absence of it, the funds might be paid out to the mortgagor's trustee in bankruptcy. (See the cases last cited, and *Pinnock v. Bailey* (23 C. D., 497); *Mutual Life Assurance Society v. Langley* (26 C. D., 686), varied on appeal (W. N., 1886), 4; *In re A. D. Holmes* (29 C. D., 786).)

Q. 10. What are the remedies of a mortgagee of freehold and leasehold property (the mortgage being in the usual form, and containing the usual covenants and provisos) for the recovery of his debt and interest?

A. The remedies are as follows:

(1) To enter into possession and receipt of the rents and profits of the mortgaged property, and retain his principal, interest, and costs thereout.

(2) To sell the whole or any part or parts of the mortgaged property and do likewise. This power can only be exercised when it is authorized by the mortgage deed or by statute, and should not be exercised unless the circumstances have arisen to warrant it. In general it is necessary that interest should be in arrear for a certain

time, or that default should be made in paying off the capital after a certain notice, in order that a power of sale may become exercisable. (See the conveyancing act, 1881, s. 20, for the conditions of the statutory power annexed to all mortgages by deed executed after Jan. 1, 1882; and see Lord Cranworth's act, 23 and 24 Vict., c. 145, part 2, for a prior statutory power.)

(3) The same statutes give a mortgagee power to appoint a receiver to pay him his interest and costs; but under the conveyancing act a receiver can only be appointed when the power of sale has become exercisable.

(4) To bring an action to recover personal judgment against the mortgagor for payment of the principal and interest. It is the practice that such a judgment may be obtained under Order XIV, as in the case of an unsecured debt.

(5) To bring an action of foreclosure against the mortgagor; and

(6) To combine the two last remedies in one action, praying for immediate personal judgment and foreclosure in case of default for six months.

COMMON LAW.—PASS PAPER.

Q. 1. Under what conditions may a writ of summons be served out of the jurisdiction?

A. A writ of summons can not be served out of the jurisdiction without leave of the court or a judge, which can be given only in certain cases, including the following: Where the action relates to land within the jurisdiction, or to the construction, rectification, or setting aside of a contract or other instrument relating to such land; where the relief is sought against a person domiciled, or ordinarily resident within the jurisdiction; where the action is founded on a breach within the jurisdiction of a contract which ought to be performed within the jurisdiction (unless the defendant is domiciled, or ordinarily resident in Scotland or Ireland); where the action is for an injunction as to anything to be done within the jurisdiction, or respecting a nuisance within the jurisdiction; where a person out of the jurisdiction is a necessary or proper party to an action against another person duly served within the jurisdiction. The application for leave to serve the writ out of the jurisdiction must be supported by evidence showing a good cause of action, and the deponent's belief as to where the defendant is, or probably may be found, whether he is a British subject or not, and the grounds on which the application is made. Where leave is given, a time is limited after the service within which the defendant is to enter an appearance. Where leave to serve the writ in Scotland or Ireland is sought, the court or judge has a discretion as to granting leave in any of the foregoing cases. (Ord. XI.)

Q. 2. What are the principal rules as to the discovery of documents in the possession of a party to an action, and what are the consequences of noncompliance with orders for discovery?

A. A party to an action may be ordered by the court or judge to make discovery upon oath of documents in his possession relating to any matter in question in the action. The order is obtained on the application of the other party; but the application may be refused or adjourned if such discovery is not necessary, or not necessary at that stage of the proceedings, or such other order may be made, either general, or limited to certain classes of documents, as the court or judge may think fit. The discovery is made by an affidavit, setting forth the documents, and distinguishing those which the deponent claims to be privileged from producing. The party seeking discovery must before applying for it pay into court the sum of £5, or such further sum as may be ordered, the money so paid in to remain in court until the action has been finally disposed of, and then to be paid to the party by whom it was paid in if the costs are adjudged to him, and otherwise to be subject to a lien for the costs.

A party failing to obey an order for discovery is liable to attachment, and, also, if a plaintiff, to have his action dismissed for want of prosecution; and, if a defend-

ant, to have his defense struck out, and to be placed in the same position as if he had not defended. (Ord. XXXI.)

Q. 3. What is the form of the writ of fieri facias, and what effects of the debtor are excepted from its operation?

A. The writ of fieri facias commands the sheriff that of the goods and chattels of the judgment debtor he cause to be made the sum stated in the writ (being the amount of the judgment debt), with interest thereon, and also the amount of the costs, with interest thereon at the rate of 4 per cent per annum. The writ is executed by the seizure and sale of the goods and chattels of the judgment debtor.

Under a fieri facias all the personal goods and chattels of the judgment debtor may be taken, with the exception of the wearing apparel and bedding of himself, or his family, and the tools and implements of his trade, the value of such articles not exceeding in the whole £5. (8 and 9 Vict., c. 127, s. 8.)

Q. 4. Describe a promissory note and a crossed check. Is the banker of the maker or the drawer, respectively, liable to make good to his customer the amount of the instrument if he has paid it on a forged indorsement purporting to be that of the payee?

A. A promissory note is a written promise by one person (called the maker) to pay a certain sum of money at a specified time or on demand to another therein named (who is called the payee) or order, or to him or bearer. The maker of a promissory note is in a position similar to that of the acceptor of a bill of exchange, and is therefore the party primarily liable on the instrument; and, like a bill of exchange, the note is transferred by delivery, if payable to the party named, or bearer, or by indorsement and delivery if payable to him or order.

A crossed check is a bill of exchange, drawn on (but not accepted by) a banker by his customer, payable on demand, and bearing across its face two parallel transverse lines either with or without the words "and company" (or any abbreviation of those words), or the name of a banker between the parallel lines. The effect of this crossing is to make the bill payable only on presentation by a banker, and if it is crossed with the name of a particular banker, it is payable only on presentation by that banker. As a check is not accepted by the banker on whom it is drawn, the drawer is the party primarily liable on it. A check is transferable in the same way as any other bill of exchange. (See bills of exchange act, 1882, Pt. 3.)

A banker who pays a promissory note, bearing a forged indorsement, can not charge his customer with the amount, as no title can be made through a forgery (*Robarts v. Tucker*, 12 Q. B., 560); but the banker of the drawer of a check is protected by statute from liability for payment of the check on a forged indorsement purporting to be that of the payee. (16 and 17 Vict., c. 59, s. 19.)

Q. 5. Explain the nature of the contract of guaranty by reference to cases decided under the statute of frauds and Lord Tenterden's act.

A. The contract of guaranty is an undertaking to answer for the debt, default, or miscarriage of another person who is, and continues, primarily liable. If, therefore, the party on whose account the promise is made was not originally under any legal liability (as where credit was given to the promisor alone), or there is a transfer of his liability to the promisor, the contract is not a guaranty within the statute of frauds. *Birkmyr v. Darnell* (Salk., 27); *Mountstephen v. Lakeman* (L. R. 7, H. L. 17.) And in a contract of guaranty the promise must be made to a third person, i. e., the creditor; hence a promise to indemnify a person against a legal liability incurred by him is not a guaranty.

In *Pasley v. Freeman* (3 T. R., 51) it was held that a fraudulent representation made to induce a person to contract with a third party was not a guaranty, and therefore was actionable though not made in writing. But under Lord Tenterden's act (9 Geo. 4, c. 14) no action can be maintained on such a representation made concerning the character, credit, etc., of another, to the intent that the latter may obtain credit for money or goods, unless the representation be made in writing signed by the party to be charged therewith.

Q. 6. What are the periods of limitation within which the principal kinds of action may be brought? When does the time of limitation begin to run in respect of a claim (1) on a promissory note payable on demand; (2) for money lent by means of a check not immediately presented for payment; (3) for damage to land resulting from a wrongful act committed some time before the damage arises or is discovered?

A. Actions for the recovery of land must be brought within twelve years after the time at which the right of action accrued; or, where the claimant's estate was originally an estate in remainder or reversion, within twelve years after the time when the right of action accrued to the owner of the preceding estate, or six years from the time when the claimant became entitled to the possession, whichever shall be the longer period. But where an acknowledgment in writing has been given of the title of the claimant, the time runs from the date of such acknowledgment. And where the claimant is under disability at the time the right of action accrues, a further period of six years is allowed from the time when the disability ceased, provided the action be brought within thirty years from the accrual of the right (3 and 4 W. 4, c. 27; real property limitation act, 1876, 37 and 38 Vict., c. 57).

Actions on contracts under seal must be brought within twenty years from the time of the accrual of the right of action, or from the time of an acknowledgment in writing, or part payment of principal or payment of interest, made or given in the meantime; or where at the time of the accrual of the right the plaintiff was under disability of infancy, coverture, or lunacy, or the defendant was beyond seas, then within twenty years after such disability shall have ceased, or the defendant shall have returned from beyond seas (3 and 4 W. 4, c. 42).

Actions on simple contracts must be brought within six years after the accrual of the right of action; the period, however, being extended by an acknowledgment, or payment, or disability of the party entitled, or absence of the defendant beyond seas, in the same way as in the case of a contract under seal (21 Jac. 1, c. 16; 9 Geo. 4, c. 14; 19 and 20 Vict., c. 97).

As regards actions of tort, the periods of limitations are, in an action for assault, battery, or false imprisonment, four years; for slander, two years; and for other torts in general, six years (21 Jac. 1, c. 16).

(1) From the date of the note; (2) from the date of the payment of the money; (3) from the date of the commission of the act, assuming that it would have been actionable before the damage had arisen.

Q. 7. Distinguish the three principal classes of bailments. A stolen article is pawned, and afterwards sold by the pawnbroker as a forfeited pledge. Can he be made to refund the purchase money when the owner claims the article from the purchaser?

A. (1) Bailments by which the bailor alone is benefited, comprising bailments of goods to be kept or dealt with gratuitously by the bailee; (2) bailments from which the bailee alone derives benefit, viz, gratuitous loans; (3) bailments for the benefit of both bailor and bailee, comprising pledges of goods, letting and hiring of goods, and delivery of goods to be kept, or carried, or otherwise dealt with by the bailee for a reward.

In bailments of the first class the bailee is liable for gross negligence only, in the care of the goods; but if he possesses skill with reference to the subject-matter of the bailment, he is bound to use it. In bailments of the second and third classes the bailee is liable for any negligence. And by the common law a carrier is answerable as bailee of the goods carried by him for loss arising from any cause, except the act of God, or the king's enemies, or defects in the goods; and a similar liability attaches at common law to an innkeeper as bailee of his guests' goods. (*Coggs v. Bernard*, Ld. Raym., 909.)

The pawnbroker can not be made to refund the purchase money; for he is not presumed to sell as absolute owner, but only to sell such right to the pledge as he

himself has, and therefore there is no implied warranty of title on the sale. (*Morley v. Attenborough*, 3 Exch., 514.)

Q. 8. A bailiff, being ordered by a landlord to distrain on the demised premises, distrains a stranger's cattle on adjoining land, sells them, and pays the proceeds to the landlord. Can the owner of the cattle maintain an action against the landlord?

A. The owner of the cattle can maintain an action against the landlord if the latter has ratified the wrongful act of the bailiff. The receipt of the proceeds of the sale, however, would not in itself be a ratification, if the landlord did not know that the distress had been wrongfully made. And in the absence of ratification by the landlord, an action of tort can not be maintained against him. But the proceeds of the sale of the cattle can be recovered from the landlord by the owner as money belonging to him. (*Freeman v. Rosher*, 13 Q. B., 780.)

Q. 9. Point out the difference between the action for false imprisonment and malicious prosecution in respect to the onus of proof. Can an action be maintained under any circumstances (1) for having brought an action against the plaintiff; (2) for having put the bankruptcy law in motion against the plaintiff; or (3) against a corporation in respect of the manager of the corporation having arrested and prosecuted the plaintiff?

A. In an action for false imprisonment the onus of proof is upon the defendant; for the detention of the plaintiff is *prima facie* illegal, and it lies upon the defendant to justify it. But in an action for malicious prosecution the proceedings are *prima facie* legal, being in due course of law; and the burden of proving that they were instituted without reasonable cause, and were therefore improper, is upon the plaintiff.

(1) No; (2) Yes. An action (similar to an action for malicious prosecution) will lie for maliciously taking proceedings in bankruptcy. (3) Yes, if the acts of the manager were done by him in the course of his employment as the servant of the corporation. (*Edwards v. Midland Railway Co.*, 6 Q. B. D., 287.)

Q. 10. A passenger from London to Paris finds on arrival at Paris that his box has been opened and the contents stolen somewhere en route. Can a man, found in possession of the stolen property in London be convicted in an English court?

A. No; unless it can be proved that the property was stolen within the jurisdiction of the English courts. (See *Harris*, Cr. L., 3d ed., 352-356.)

Q. 11. State shortly the mode of proceeding on a criminal charge falling within the summary jurisdiction of justices.

A. The mode of proceeding is as follows: At the hearing the substance of the information is stated to the defendant, and he is asked if he has any cause to show why he should not be convicted. If he admits the truth of the charge, and does not show cause why he should not be convicted, the court proceeds to convict. If he denies the truth of the charge, the court hears the parties and their witnesses (all the evidence being on oath) and proceeds to convict the defendant or else dismiss the information, as the case may require. (See *Harris*, Cr. L., 3d ed., 492.)

Q. 12. In what case can more than one offense be inquired into on the trial of an indictment?

A. Two or more offenses can be inquired into where all the offenses are misdemeanors. But a count for a felony can not, in general, be joined with a count for a misdemeanor. And, as a general rule, several different felonies can not be charged in the same indictment. To this rule, however, there are some exceptions. On an indictment for larceny a count for receiving stolen property may be added, and on an indictment for larceny or embezzlement several counts may be inserted for distinct acts of stealing or embezzlement, not exceeding three, committed within six months from the first to the last. And in certain cases, if the prisoner has been previously convicted, a count is added charging him with the previous conviction. (*Harris*, Cr. L., 3d ed., 342-344.)

ROMAN LAW.—PASS PAPER.

Q. 1. *Scriptum jus est lex, plebiscita, senatusconsulta, principum placita, magistratum edicta, responsa prudentium.* Explain this passage.

A. By *jus scriptum* is meant law that has been committed to writing at its origin, as opposed to *jus non scriptum*, or law originating in custom (Austin, p. 529). In the Roman system *jus scriptum* existed in the several forms mentioned in the passage cited. *Lex* was a law passed in early times in the *Comitia Curiata*, and later in the *Comitia Centuriata*. *Plebiscita* were laws made in the *Comitia Tributa*. *Senatusconsulta* were laws made by the Senate. *Principum placita* were laws made by the emperor in the exercise of his sovereign authority (*imperium*). *Magistratum edicta* were collections of rules framed by such magistrates as had the *jus edicendi*, and chiefly by the *prætor urbanus*. *Responsa prudentium* were the opinions of such jurists as enjoyed the right of giving opinions that had the force of law (Inst. i, 2).

Q. 2. Distinguish agnates from cognates and illustrate the importance of the distinction.

A. Agnates were persons related to each other by the fact of subjection to the power of the same *paterfamilias*, or by there having been a person who would have been their common *paterfamilias* if he had been living. Cognates were persons related by blood. Hence, among agnates were included persons who, having been made subject to the *patria potestas* merely by adoption or arrogation, were not cognates; while cognates included the issue of female agnates and emancipated children, who were excluded from the class of agnates.

Agnatic relationship was attended with rights of succession on intestacy, to which cognates were not entitled, and with a liability to the office of tutor, from which cognates were free.

Q. 3. What was *bonorum possessio*? If A, being in possession of an immovable, die before the time required for usucapio has been completed, will the time that has already elapsed be reckoned in favor of a *bonorum possessor*?

A. *Bonorum possessio* was the succession to an inheritance under the provisions of the prætorian law, as opposed to succession by the *jus civile*. The rights of a successor by *bonorum possessio* were similar in all respects to those of the heir by the *jus civile*. Accordingly, in the case put in the question, the time that had elapsed would be reckoned in favor of a *bonorum possessor*, since he continues the *persona* of the deceased (Inst. ii, 6, 12).

Q. 4. Give an account of the will *per æs et libram* and of the soldier's will.

A. The will *per æs et libram* was, in effect, a conveyance of the testator's estate by the mode of transfer known as *mancipatio*. This was a conveyance made by fictitious sale in the presence of five witnesses and a balance holder (*libripens*). Originally the nominal purchaser of the testator's estate (*familie emptor*) was the heir, but afterwards, in order to avoid the inconveniences attending an irrevocable sale by the testator in his lifetime to his heir, the practice was adopted of employing, as *familie emptor*, a third person, to whom the sale was made merely for form's sake; a statement (*nuncupatio*) being made by the testator of the name of the heir and the other provisions of the will, either orally or in writing (Sand., 5th ed., 163).

A soldier on service could make a valid testament without observing the rules that applied to testaments generally. Thus no particular formalities were required; the intention to make a testament and its terms might be proved by any writing or by witnesses; persons might be instituted as heirs who were generally incapacitated; the testator was not bound to institute or formally disinherit his children; his will was not liable to be set aside as *inofficious*; he could give more than three-fourths of his property in legacies; he could die partly testate and partly intestate; and his will was not invalidated by his undergoing the *minima capitis deminutio*. These privileges, which were given by imperial constitutions, existed only while the soldier

was in actual service; and the informal testament remained in force only while the service continued and for one year after the testator's discharge.

Q. 5. A testator dies leaving a son and a grandson by a deceased daughter. He appoints his son heir, does not mention the grandson, and bequeaths all his property to a stranger. What is the effect of the will?

A. If there was not sufficient reason for the omission to appoint the grandson heir, or otherwise provide for him, he may have the will set aside as *inofficiosum*. (Inst. ii, 13, 3; ii, 18.) But if there was legal ground for the exclusion of the grandson, the will is valid; but under the *Lex Falcidia*, the son will be entitled, as heir, to one-quarter of the estate, as against the legatee (Inst. ii, 22).

Q. 6. Explain and illustrate *prætoriae stipulationes*, *judiciales stipulationes*, and *communes stipulationes*.

A. *Prætoriae stipulationes*.—These were stipulations that in certain cases were made by order of the prætor, as a security for the performance by the promissor of some duty that was not enforceable directly by action. They included the stipulation *damni infecti*, by which a person who was owner of a building that was likely to fall down bound himself to make good any damage that should be done to his neighbor through the fall of the building; and the stipulation *legatorum*, by which an heir bound himself to pay a legacy, that was not immediately payable, when it should become due.

Judiciales stipulationes.—These were stipulations made by order of the judge in the course of judicial proceedings to secure the performance by the defendant of acts that might have to be done by him in order to give effect to the judgment; *e. g.*, the stipulation *de dolo*, by which the defendant bound himself to carry out the sentence of the court without any attempt at fraud on his part; and the stipulation *de persequendo servo qui in fuga est restituendore pretio*, by which the promissor was bound to pursue a runaway slave who was the subject of the action, or pay his price.

Communes stipulationes were such as either the magistrate or the judge in an action might order to be made. Instances of these were the stipulation *rem salvam fore pupilli*, by which a tutor bound himself for the security of the pupil's property; and the stipulation *de rato*, by which a procurator bringing an action in the name of his principal undertook that what he did would be ratified by the principal. (Inst. iii, 18.)

Q. 7. A slave, of whom Titius has the usufruct and belonging to Mævius, enters into a stipulation; discuss who will acquire the benefit of the contract.

A. If the stipulation had reference to the ordinary labors of the slave or to the property of Titius the benefit of the contract would be acquired by Titius; otherwise it would be acquired by Mævius. (Inst. iii, 28, 1, 2.)

Q. 8. What is meant by *obligationes quæ ex delicto nascuntur*? Give examples. Can you suggest any reason why such obligations were classified as *res*?

A. By *obligationes quæ ex delicto nascuntur* is meant obligations arising from violations of legal rights otherwise than by breach of contract, and which the early Roman law recognized as legal wrongs subject to special remedies by action. They comprised theft (*furtum*), robbery with violence (*rapina*), wrongful damage to property (*damnum injuria*), and wrongful damage to the person or reputation of a free-man (*injuria*).

These obligations were classified as *res* probably because the object of the obligation was the acquisition of a thing, viz., the sum payable by way of compensation for the wrong. Rights to the acquisition of things are distinguished generally in Roman law as *res incorporales*. (Inst. ii, 2, 2.)

Q. 9. What were the various remedies open to the owner of a stolen article?

A. The remedies were (1) the *actio furti* for the recovery of a penalty, which was four times the amount of the loss in the case of manifest theft and twice that amount in the case of nonmanifest theft; and (2) either a real action (*vindicatio*) for the recovery of the stolen property or a personal action (*condictio*) for its value.

The owner, however, could not in general bring the *actio furti* where the thing, having been in the possession of another person, had been stolen from him; for as the latter was usually liable to the owner, and was therefore the party interested in the safety of the thing, it was he, and not the owner, who was entitled to sue for the penalty. But the other remedies belonged to the owner in every case. The real action for the recovery of the stolen article might be brought against the thief or any other person in whose possession it might be; the personal action for the value could be brought only against the thief or his heirs. It was contrary to principle to allow the plaintiff the choice of either a real or a personal action, but in the case of stolen goods this was allowed in *odio furum*. (Inst. IV, 1.)

Q. 10. Translate with brief notes: *Idem juris est, si rem sacram aut religiosam, quam humani juris esse credebat, vel publicam, quæ usibus populi perpetuo exposita sit, ut forum vel theatrum, vel liberum hominem, quem servum esse credebat, vel rem, ejus commercium non habuerit, vel rem suam dari quis stipuletur. Nec in pendenti erit stipulatio ob id quod publica res in privatum deduci et ex libero servuli fieri potest et commercium adipisci stipulator potest et res stipulatoris esse desinere potest: sed protinus inutilis est. Item contra, licet initio utiliter res in stipulatum deducta sit, si postea in earum qua causa de quibus supra dictum est, sine facto promissoris devenierit, extinguatur stipulatio. Ac nec statim ab initio talis stipulatio valebit "Lucium Titium, cum servus erit, dare spondes" et similia, quia quæ natura sui dominio nostro exempta sunt in obligationem deduci nullo modo possunt.*

A. "The rule is the same if a person stipulates for a thing sacred or religious which he thought to be the subject of commerce, or for a public thing appropriated to the use of the people in perpetuity, as a forum or theater, or for a freeman whom he thought to be a slave, or for a thing of which he has not the *commercium*, or for a thing belonging to himself. Nor will the stipulation remain in suspense on the ground that the public thing may become private, or the freeman may become a slave or the stipulator may acquire the *commercium* of the thing or the thing which now belongs to him may cease to be his; but the stipulation is at once void. So, conversely, although a thing may have been validly stipulated for originally, if it afterwards fall within the description of any of those things before mentioned without the fault of the promissor, the stipulation is extinguished. And such a stipulation as the following, and others of a similar class, are not valid even at the outset: 'Do you bind yourself to give Lucius Titius when he shall become a slave?' for that which by its nature is independent of our ownership can not in any way be made the subject of an obligation."

(Inst. iii, 19, 1, 2.) A thing that was *extra-commercium*, or of which the stipulator had not the *commercium*, could not be the subject of a stipulation, even though the stipulator should be ignorant of the fact that the thing was of such a kind; and the stipulator had no remedy under the contract against the promissor. And no change of circumstances could give validity to a stipulation that was originally, or subsequently became, void. (Sand., 5th ed., 338.)

EXAMINATION FOR STUDENTSHIPS.

GAIUS AND JUSTINIAN.

Q. 1. Examine the distinctions that have been made between correality and solidarity.

Q. 2. Account for the existence of *infamia* as a form of punishment, and state its consequences.

Q. 3. In what ways might suretyship be contracted? To what extent was the liability of the surety affected by the form of contract?

Q. 4. Give a brief sketch of the development of the Roman law of mortgage.

Q. 5. Explain the following: *Antichresis*, *agrimensores*, *altius tollendi jus*, *ararium nomen*, *actio recepticia*, *auctoratus*, *regula catoniana*, *dictio dotis*.

Q. 6. Explain the following: (1) *Adversus extraneos vitiosa possessio prodesset solet.* (2) *Incertam partem possidere nemo potest.* (3) *Plures eandem rem in solidum possidere non possunt.*

Q. 7. Sketch the history of the *dos*. What were the rights and duties of a husband in respect of the *dos* in the time of Justinian?

Q. 8. Describe the varying policy of the Roman law in regard to restraints on the manumission of slaves.

Q. 9. What were the difficulties in the way of giving effect to the intentions of a testator by means of a *testamentum*? and explain historically how those difficulties arose.

Q. 10. Explain and illustrate the degree of certainty required to make a valid legacy.

DIGEST AND HISTORY OF ROMAN LAW.

Q. 1. Examine the validity of the following *pacta*: (1) *Post divortium convenit, ne tempore statuto dilationis dos reddatur, sed statim.* (2) *Si in tutelæ actione convenit, ut majores, quam statutæ sunt, usuræ præstentur.* (3) *Ut ex causa depositi omne periculum præstet.* (4) *Ne operis novi nunciationem exsequar.*

Q. 2. Specify the ways in which contracts could be dissolved, and state with precision the effect of an *exceptio pacti conventi*.

Q. 3. *Pacta conventa, quæ neque dolo malo, neque adversus leges, plebicitæ, senatusconsulta, edicta principum, neque quo fraus cui eorum fiat, facta erunt, servabo.* Translate. Show in what way and with what results the prætor affected the law of contract.

Q. 4. State and illustrate the distinction between *pacta in rem* and *pacta in personam*?

Q. 5. Translate and answer the following: (1) *Si pacto subjecta sit pænæ stipulatio, quæritur, utrum pacti exceptio locum habeat an ex stipulatu actio?* (2) *Si unus ex argentariis sociis cum debitore pactus sit, an etiam alteri noceat exceptio?* (3) *Qui pecuniam a servo stipulatus sit, quam sibi Titius debebat, si a Titio petat, an exceptione pacti conventi summoverti et possit et debeat, quia pactus videatur ne a Titio petat quesitum est?*

Q. 6. Imperatores Antoninus et Verus ita rescripserunt: *Privatis pactionibus non dubium est, non lædi jus cæterorum. Quare transactione, quæ inter heredem et matrem defuncti facta est, neque testamentum rescissum videri posse, neque manumissis vel legatariis actiones suæ ademptæ. Quare quidquid ex testamento petunt, scriptum heredem convenire debent: qui in transactione hereditatis, aut cavet sibi pro oneribus hereditatis, aut si non cavet, non debet negligentiam suam ad alienam injuriam referre.* Translate and comment.

Q. 7. Vult igitur oratio apud prætorem de istis queri: in primis de causa transactionis; dein de modo; tertio, de persona transigentium. Translate and explain. Compare the use of *causa* and *modus* with its employment in other connections.

Q. 8. Give an account of the Gregorian and Hermogenian codes.

Q. 9. Give an account of the legal literature produced during the half century after Justinian.

Q. 10. Summarize the chief points of Roman law in Bracton.

JURISPRUDENCE.

Q. 1. *Lex est commune præceptum, virorum prudentium consultum, delictorum quæ sponte vel ignorantia contrahuntur coercitio, communis rei publicæ sponsio.* (Dig. I, 3, 1.) Explain and criticise this definition, and compare it with any modern view of "law."

Q. 2. What objections have been taken by Mill to Austin's classification of law? Consider such objections.

Q. 3. *Nihil commune habet proprietas cum possessione.* Discuss this statement

and mention some of the views that are held as to the relation of *possessio* to title to property.

Q. 4. What are the constituents of English common law? Illustrate your answer by reference to the writings of Hale.

Q. 5. Compare the meanings of the terms *res* and *obligatio* as used by Austin and the Roman jurists, respectively.

Q. 6. Point out by reference to the writings of Maine the different causes that led to feudalism. Consider to what extent traces of feudalism are to be found in modern English law.

Q. 7. "The mental functions of the brain may be described as threefold—intellectual, emotional, and volitional. No one can be said to be of sound mind unless all these functions are healthily performed." Explain and discuss this statement with reference to the criminal responsibility of the insane. What is the nature or degree of the insanity that in English law will exempt from punishment for an offense?

Q. 8. Compare the English judicial system as it existed in the time of Henry II with that now in force.

Q. 9. "It is with government as with medicine—its only business is the choice of evils." Explain what Bentham meant by this statement, and give his analysis of political good and evil.

Q. 10. By what principles ought a state to be guided in framing its marriage laws, as to (a) what persons shall be allowed to marry, (b) the conditions of the marriage, and (c) permitting divorce?

INTERNATIONAL LAW.

Q. 1. Compare the state system of Europe as it existed after the peace of Westphalia with the state system as it exists at the present day and point out the chief causes of the changes that have occurred in the interval.

Q. 2. Give an account of the early maritime codes and state the modern practice on some of the international rules found in such codes.

Q. 3. State the chief rules relating to the transfer of ships or their cargoes from the belligerent flag to the neutral flag in anticipation of or during a war.

Q. 4. Discuss the effect of a war upon contracts between subjects of the belligerent states and upon debts due from one belligerent state to the subjects of the other state. Give an account of the controversy regarding the Silesian loan.

Q. 5. What restrictions are belligerents under as regards the manner in which a war is to be carried on? State the rules laid down by the Brussels Conference on this subject.

Q. 6. Explain the nature of the blockade recently established by the great powers against Greece, and discuss its legality. Give some instances of similar blockades.

Q. 7. Consider what amounts to contraband of war from the point of view of (a) treaties; (b) text writers; and (c) decisions of prize courts.

Q. 8. "Domicile was unknown in old English law as the foundation of jurisdiction, and has not even now been made the foundation of English jurisdiction on obligations." Explain this statement, and trace the historical development of domicile in English law. What are the chief criteria of intention as regards domicile?

Q. 9. Give an account of the chief sources of private international law, and point out how some of its rules have been influenced by the doctrine of nationality.

Q. 10. State the circumstances under which an English court will give damages for a tort committed abroad. A British vessel comes into collision with an American vessel, and proceedings are taken in England by the owners of the British vessel against the owners of the American vessel. For the defense it is pleaded (1) that the vessel was in charge of a pilot; (2) that the English vessel violated the English rule of the road, and in addition (3) the British limitation of liability is claimed. Consider the legal effect of these defenses, distinguishing according as the collision occurred (a) within, (b) beyond three miles from the English coast.



CHAPTER XV.

LEGAL EDUCATION IN CANADA, AUSTRALIA, SPANISH AMERICA, JAPAN, AND CHINA.¹

The information at hand concerning legal education in the autonomous colonies of Great Britain and in the South and Central American republics, as well as in Asiatic countries, is meager, if compared with the exhaustive statements on that subject from the United States and England, France, and other European countries.

The replies received from these countries were few and incomplete, hence resort was had to printed information contained in annual reports and university catalogues. The fact that the colonies of England to a great extent copy the institutions, modes of procedure, and technical terms of the mother country enables the reader to supply much by inference which it is impossible to state authoritatively. A few essential differences are stated in the following pages.

I.—CANADA.

(1) *Victoria University*.—Law Department, Cobourg, Canada; Wm. Kerr, dean. Eleven examiners, 21 students. Course consists of 4 years of about 7 months each.

First year's studies: Cicero, Catilinam, I-IV, Horace, Demosthenes, Homer, Hallam's Middle Ages, Blackstone's Commentaries, Vols. I and II; history of philosophy, moral philosophy, Ferrier's History of Greek philosophy, Corneille, Cinna, Molière, Les Precieuses Ridicules, Roche, Prosateurs Français, XVIII Century.

Second year: Cicero de Officiis, Book I, Aristotle's Ethics, book I, political economy, Racine Les Plaideurs, Montesquieu L'Espirit des Lois, Blackstone's Commentaries, Vol. III, logic, psychology, constitutional history of England, Mill on Utilitarianism, Green's Prolegomena to Ethics.

Third year: Mercantile law, common law, real property, equity jurisprudence, Justinian Institutes, statutes relating to the constitution of Canada, constitution of Canada, theory of morals and legislation.

Fourth year: Evidence, contracts, Story's Conflict of Laws, Blackstone's Commentaries, Vol. IV, Canadian statutes relating to the administration of justice and criminal law, elements of jurisprudence.

(2) *Law School of the Law Society of Upper Canada*, Osgoode Hall, Toronto; W. A. Reeve, principal. Four instructors. School year extends from October to May, with holiday vacation, about 28 weeks.

The course is divided into three years, as follows:

First year: Contracts, real property, common law, equity, statute law.

Second year: Criminal law, real property, personal property, contracts and torts, equity, evidence, practice and procedure, statute law.

Third year: Contracts, real property, criminal law, equity, torts, evidence, commercial law, private international law, practice and procedure, statute law.

¹ See note to Chapter XIII, page 376.

In order to be admitted the student is required to pass the matriculate examination of some university in the Province of Ontario. Sixteen is the required age. Method of instruction is by lectures, oral and written examinations, and moot courts.

(3) *University of Toronto*, Canada, Law Department; Sir Daniel Wilson, president. Twelve instructors. The scholastic year is divided into two terms, from October 1 to December 23 and from January 2 to May 31, respectively. The course extends over 4 years, as follows:

First year: Elementary economics, English constitutional history.

Second year: History and criticism of economic theory, history of English law, jurisprudence, English and colonial constitutional law, criminal jurisprudence.

Third year: Economic history, political philosophy, Roman law, federal constitutional law, international law.

Fourth year: Conflict of laws, jurisprudence, commercial and maritime law, general jurisprudence, municipal institutions. Lectures. Oral and written examinations are in vogue.

(4) *Queen's College and University*, Law Department, Kingston, Canada; Sanford Fleming, principal and vice-chancellor; Very Rev. George Monro Grant, vice-principal. Six instructors, 3 students. School year extends from October to April, about 28 weeks.

The course of study is not given in catalogue, but it refers to the conditions for acquiring the degree of LL. B., as follows: 1. Undergraduates who are taking the honor course of the university in history and political science may, after completing that course, proceed to the degree of LL. B. by passing on the following works: Dicey's Law of the Constitution, Harris's Principals of Criminal Law, Harcastle on Statutes, Westlake's Private International Law, Wheaton's International Law, Justinian's Institutes (Sandars). 2. Graduates will be allowed any subjects in the above course which they may have already passed in arts. 3. Barristers at law or persons who may have been admitted as students at law by the Law Society of Upper Canada, and have passed their second intermediate examination, will be admitted to the degree by passing on the honor course of the university in history and political science, together with the works specified in section 1. 4. Graduates of this or any recognized university, being barristers at law, will be admitted to the degree by passing on the following works, in addition to those specified in section 1: Bourinot's Manual of Constitutional History of Canada; Bryce's American Commonwealth, Vol. I, Bagehot's English Constitution, Gneist's History of the English Constitution, Holland's Elements of Jurisprudence, Maine's Ancient Law.

(5) *University of Laval*, law department, Ulric-Joseph Tessier, Quebec, Canada, Louis A. Jette, Montreal, Canada, deans. Twenty instructors, 42 students. Three scholastic years constitute the course, 9 months in a year.

Studies for the course are: Roman law, 210 lessons, 1 year; civil law, 630 lessons, 3 years; civil procedure, 144 lessons, 2 years; commercial law and admiralty law, 109 lessons, 1 year; criminal law, 108 lessons, 1 year; administrative law, 150 lessons, 3 years; international law, 30 lessons, 3 years. In order to enter the course an examination in the following studies is required: French, English, Latin, Greek, history, geography, literature (rhetoric), mathematics (arithmetic, algebra, geometry, trigonometry), astronomy, physics, chemistry, mineralogy, geology, botany, mental and moral philosophy.

No limit as to age exists, but the law fixes the age for admission to the bar at 21. The following degrees are conferred: Bachelor, licentiate, and doctor. Women are not admitted to the practice of law. After one year of practical work in some office after graduating, the candidate is admitted to the provincial bar examination.

(6) *McGill University*, law department, Montreal, Canada, N. W. Trenholme, dean. Eleven instructors, 18 students. Three years constitute the course; the year is divided into two terms; the first term extends from October to January, the second from January to the latter part of April.

The studies for the entire course are: History of Roman law, Maine's ancient law, Institutes of Justinian, Gains commentaries, criminal law, international law, law of real estate, commercial law, law of contracts, legal bibliography and history, civil procedure, notarial law, and civil law.

In order to enter the course an examination in the following studies is necessary: Latin, French, exercises in composition in English and French, mathematics, history, literature, rhetoric, and philosophy. The courses of lectures on commercial subjects are arranged so as to give young men engaged in banks and other business houses an opportunity of attending them. Written examinations are held at the end of each term. In order to acquire the degree of B. C. L. (bachelor of civil law) the student is required to prepare a thesis, which must be approved.

(7) *Dalhousie University*, law department, Halifax, Nova Scotia, Richard Chapman Weldon, dean. Seven instructors, 60 students. The course is three scholastic years of about 30 weeks each.

First year's course is: Real property, crimes, contracts, torts, constitutional history.

Second year: Constitutional law, equity, partnership, bill and notes, conflict of laws.

Third year: International law, equity, insurance, evidence, sales.

The lecture system is the principal method of instruction. The Larydell method is employed in the class in contracts. Candidates for entrance to the course must stand examination in Latin, Greek, mathematics, English, history and geography. Moot courts are held fortnightly, and are participated in by candidates for degrees. Also the students have a mock parliament for the discussion of legal and constitutional questions.

II.—AUSTRALIA.

(1) *University of Adelaide*, Adelaide, South Australia, Samuel James Way, chancellor, George Henry Farr, vice-chancellor. Seven instructors, 38 students. Four years constitute the course. Each year is divided into three terms extending from March to December.

The studies are, first year: Roman law, two lectures of one hour each per week; Latin, three lectures of one hour each per week; constitutional law, one lecture of one hour per week; English language and literature, two lectures of one hour each per week.

Second year: Latin, three lectures of one hour each per week; law of property, two lectures of one hour each per week; logic, two lectures of one hour per week; elements of pure mathematics, three lectures of one hour each per week.

Third year: Jurisprudence, one lecture of one hour per week; principles of equity, one lecture of one hour per week; law of contracts, one lecture of one hour per week.

Fourth year: International law, one lecture of one hour per week; law of wrongs, one lecture of one hour per week; law of procedure, one lecture of one hour per week; mental and moral philosophy, two lectures of one hour each per week.

The candidate for admission must be 16 years of age and must have passed the senior public examination of the university, which includes Latin. After graduation the student is required to study in the office of a practicing lawyer three years before he is admitted to the bar. Legal education in South Australia is at present confined entirely to this university.

(2) *The University of Victoria, Melbourne*.—Law department, Anthony Colling Brownless, chancellor; John Madden, vice-chancellor. Five inspectors, 97 students.

For *articled clerks* in service the course is, first year: British history, law of obligations. Second year: Constitutional law, property law. Third, fourth, and fifth years: Real property and conveyancing; common and statute law; equity, divorce, matrimonial, and ecclesiastical law; insolvency and admiralty; criminal law; prac-

tice of the supreme court; practice of the inferior courts; constitutional law and history.

For *bar students*, first year: Jurisprudence (the philosophy of law); constitutional law; Roman law; property; obligations. Second year: International law (public and private); wrongs; procedure.

Articled clerks are examined twice by university and once by the board of examiners for attorneys, appointed by the judges of the supreme court. *Bar students* are examined twice during the law course by the university and must attain the degree of bachelor of law before being admitted to practice at the bar. Fifteen is the required age for entering the course.

(3) *University of Sidney*.—Law school, Sir William Montagu Manning, chancellor; Arthur Renwick, vice-chancellor, Sidney, New South Wales. One professor and 4 lecturers, 25 students.

The course is a three year one, each year consisting of three terms of ten weeks. Studies for first term are: Jurisprudence and the theory of legislation; constitutional law; international law; Roman law.

Second year: The law in force in New South Wales relating to contracts, torts, crimes, procedure, pleading, and evidence.

Third year: The law in force in New South Wales relating to real and personal property and conveyancing, equity procedure and subjects of equitable jurisdiction.

No age limit is prescribed. A two-year course in the faculty of arts is required of a candidate for the law course. The principal mode of instruction is by lectures. Moot courts are held periodically. The degree of LL.B gives a right to admission to the bar; in respect to the solicitor's branch of the legal profession it reduces the term of articles from five to three years.

The university was founded in 1858. Its degrees in art, law, and medicine are recognized as on an equality with those of the United Kingdom.

(4) *Queensland*.—There are no institutions teaching jurisprudence; persons are educated for the legal profession by private study only. In the case of students for the bar study in a barrister's chamber is not necessary, but it is a growing custom for such students to read with some practicing barrister for a period of about twelve months and act in the capacity of what is called "devil" to him. It is the custom that such students, even though admitted to the bar, do not practice during such period of "deviling." In the case of candidates for admission as solicitors it is necessary among other things that they should have served some practicing solicitor as an articled clerk for a period of five years.

Lawyers are divided into (1) barristers; (2) solicitors. There is another grade of practitioners who are not numerous and can scarcely be called lawyers, but do legal work, *i. e.*, conveyancers. In law the professions here are amalgamated; that is to say a barrister may practice as a solicitor, or vice versa, but in practice, with but rare exceptions, the professions are kept entirely distinct.

(5) *University of New Zealand*.—By virtue of the "New Zealand University act" of 1874, all of the colleges of New Zealand were affiliated to the University of New Zealand. Two of these colleges have law departments, as follows: (1) University of Otago, Dundee, N. Z., Rev. Donald McNaughton Stuart, chancellor. Nine professors and 12 lecturers. The course embraces jurisprudence, law of property, constitutional history, and law. (2) Canterbury College, Christ Church, N. Z., Sir James Hector, chancellor. Five professors and 3 lecturers. The course embraces jurisprudence, constitutional history, Roman law, international law, contracts, and torts.

Both courses extend over a period of three years, six months in the year. It is required that an applicant to these courses must have "kept two terms" at one of the affiliated colleges. After graduation a professional examination is necessary in order to become a practitioner.

III.—SPANISH AMERICA.

A. *Mexico*.—Higher education is offered in colleges for professional instruction, but there is no university of note in Mexico. There are among the colleges several schools of law (in 1875 an official report [the latest available] enumerated 33 of such schools). The course generally followed in the leading law schools is as follows: Natural law, Roman law, Mexican law, constitutional law, administrative law, international and maritime law, penal legislation, civil and criminal procedure, legislation compared, medical jurisprudence, political economy.

B. *Costa Rica*.—By presidential decree of March 2, 1891, it was ordered that a provisional school of law should be opened in San Jose. The ancient school of law was abolished in 1890 when the University of St. Thomas was reestablished. This university has not begun its functions as yet because its statutes have yet to receive congressional sanction. To the course in legal studies are annexed courses in philosophy and literature. The provisional school of law is under the control of the council of advocates which formulates the list of professors. During the mutations that have taken place in past years in the University of St. Thomas, there were efforts made to continue the law course, and by decree of August 22, 1888, these classes were reunited. The course formulated at that date included civil law, Roman law, public law, administrative law, mercantile law, civil and criminal procedure, international law, natural and criminal law, forensic oratory, and political economy. Whether the new reestablishment continued all these branches is not known. It is stated, however, that but few students were admitted to the course in 1888-89, and that the future of the legal faculty or school depended somewhat upon its continuance as a private institution supported by the aforementioned council, or whether it be made public by making it subject to the department of education.

C. *Colombia*.—According to the "Informe del Ministro de Instruccion Publica, 1888," the University of Antioquia has among its faculties that of jurisprudence and political science. The course of study includes Roman law and history, civil law of the United States of Colombia (two courses), comparative mercantile law, international law (public and private), public law of ancient and modern nations with their bearing on the public law of Colombia, political economy, statistics and elementary knowledge of public property. The number of law students is not given, but the total number of students in the university was 222.

Courses in law were also found in the "Colegio Academico de Pasto," which has a class of law students, and in the "Seminario Conciliar de la Diocesis," which offers a course in canonical law. A private college established in 1841 in Barranquilla, in the Department of Bolivar, which is not affiliated with the national university, has faculties of literature, philosophy, and jurisprudence. The "Colegio de la Esperanza," which has been united with the national university, has a course in jurisprudence. The "Colegio del Departamento de Bolivar" has six pupils studying law. They studied the institutes of Roman law, Roman history, philosophy of law, public and private international law, political economy, statistics, and elementary knowledge of laws appertaining to public property (*hacienda publica*).

The "Universidad Catolica de Bogota," founded in 1884, has, according to its founder's wishes, four faculties, but up to date only those of philosophy and letters and law are in operation. The examinations in 1888 in this university indicated that a high standard of excellence is expected, for only 2 students passed in political economy, 7 in Spanish law, 4 in civil law, 4 in criminal law, and 4 in the national code. There were other students, but they failed in examination. The "Colegio Mayor de Nuestra Señora del Rosario Bogota" had a regular course of law studies; 19 students of Roman law, 37 of philosophy of law, 38 of public law, 27 of civil law (first term), 18 in second term; 14 of mercantile law, 56 of international law, 22 of criminal law, 27 of court procedure, 30 of canonical law. The usual classes in Spanish law and political economy were not open during 1888.

Thus it is seen that the people of the United States of Colombia (3,879,600, according to the census of 1881) bestow much importance upon the study of law, as it is found not only in the universities, but also in minor colleges and private institutions.

D. *Venezuela*.—According to the “Memoria del Ministro de Instruccion Publica, 1891,” the faculty of political sciences in the Central University of Venezuela and that of political sciences in the University of the Andes have the following courses: The Central University has Roman law, public law, ecclesiastical law, Spanish law, international law, civil and commercial codes, principles of legislation, administrative and penal law, and military law. The course extends over five years. The students of the first class numbered 47, those of the third class 22, those of the fifth class 26. The number of bachelors of political sciences mentioned in the year 1889-90 was 21.

The University of the Andes reported courses in Roman law, 13 students; Spanish and canonical law, 13 students; commercial code, 22 students; international law, 22 students; political economy, 14 students, and code of procedure 14 students. Between the dates of September 12, 1889, and November 15, 1890, 5 students received the degree of bachelor of political sciences and 8 that of doctor of political sciences in the University of the Andes.

E. *Ecuador*.—According to the “Informe del Ministro de Negocios Ecclesiasticos, Instruccion Publica, Justicia, Beneficencia y Caridad y Estadistica de 1892,” the faculty of jurisprudence in the Central University of Ecuador has classes in civil law, including Roman law, Spanish law, and laws of Ecuador (47 students); canonical law, including public ecclesiastical law and history of the general councils (47 students); political economy and general legislation (with 11 students of the fourth class and 19 of the third class); constitutional and administrative science, including international law (30 students); criminal code and practice, commercial law, military code, and mercantile procedure (29 students). The completion of these law courses covers six years. The total number of students is not given, the same names being reproduced in different legal branches. In the departments of Azuay and Guayas there are complete law faculties mentioned. It is surmised that the students of these so-called university corporations go to the Central University at Quito to obtain their degrees. [This method is found in Spain, where the students from the minor universities go for such purpose to the Central University at Madrid.] These provincial university courses are as follows: The “Corporacion Universitaria del Azuay” has a six years’ course in jurisprudence; the first and second courses include civil law of the country compared with Roman law and the history of the laws of other countries. The third and fourth courses include public law, constitutional and administrative science, and political economy. The fifth and sixth courses include law practice, commercial, penal, and military codes, civil and criminal practice, also canonical law.

The “Corporacion Universitaria del Guayas” has also a six years’ course in law. The branches for the first and second years are civil laws of Ecuador, Roman and Spanish laws, canonical and public ecclesiastical laws. The third and fourth years include international law, constitutional and administrative science, political economy, civil and penal legislation. The fifth and sixth years take up the codes, *i. e.*, practice in civil and criminal law, penal, military, and mining laws, commercial and special laws. The students in law are not enumerated, but there are 485 taking higher studies.

F. *Brazil*.—Higher education is controlled by the Central Government, which maintains two schools of law, two of medicine, four military, and one naval school, a school of mines, and a polytechnic, with a total scholarship of 2,916 in 1890. For students of law the following three courses are prescribed by law, under date of January 2, 1891: Science of jurisprudence; science of government and administrative law; preparation for notarial work.

The course in science of jurisprudence embraces the following: Philosophy and history of law; common and constitutional law; Roman law; criminal law, includ-

ing military law; civil law; commercial law, including maritime law; medical jurisprudence; criminal, civil, and commercial procedure; court practice (practice in pleading); history of national law; essentials of political economy and administrative law. This course is divided into four terms, followed by examinations, as follows: First, philosophy and history of law; common and constitutional law. Second, Roman law; civil law; commercial law; criminal law. Third, medical jurisprudence; civil law, continued; commercial law, continued. Fourth, history of national law; criminal, civil, and commercial law; essentials of political economy and administrative law; court practice (practice in pleading).

The course in science of government and administrative law embraces the following: Philosophy and history of law; common law; constitutional law; international law; diplomatic law and history of treaties; science of administration and administrative law; political economy; science of finances and accounts of state; public hygiene; comparing of legislative acts which relate to private law. The above course is divided into three terms, followed by examinations, as follows: First, the same as in the science of jurisprudence. Second, international law; diplomatic law and history of treaties; political economy; public hygiene. Third, science of administration and administrative law; science of finances and accounts of state; comparing of legislative acts which relate to private law.

The course for notaries is divided into two terms, followed by examinations, as follows: First, explanation of state constitutional and administrative law; explanation of state criminal, civil, and commercial law. Second, explanation of state law procedure; court practice.

It will be noticed that the study of science of jurisprudence covers four terms, that of science of government and administrative law three terms, while for students preparing for notarial work only two terms are prescribed. It is reasonable to suppose that by term is meant a year.

The same law establishes chairs for teaching the above courses.

G. Peru.—At Lima the oldest university in America, "Universidad de San Marcos," teaches jurisprudence, medicine, political science, theology, and applied science. A statement of the course in jurisprudence and other details are not available.

H. Bolivia.—This country has five universities, in which law, medicine, and theology are taught, with a total of 1,384 students and 83 professors.

I. Uruguay.—The "Universidad de la Republica" at Montevideo, sometimes called the University of Montevideo, is reported in the "Anuario Estadístico del Uruguay, 1889," as having 14 professors and 147 students in the faculty of law and social sciences. The course of study, according to the "Laws and Regulations for Higher Studies," published in 1890, covers a five years' period, and is subdivided as follows:

First year: Philosophy of law, Roman law, civil law (first course), constitutional law (first course).

Second year: Civil law (second course), constitutional law (second course), penal law (first course), public international law.

Third year: Civil law (third course), penal law (second course), political economy (first course), commercial law (first course), judicial proceedings (first course).

Fourth year: Civil law (fourth course), political economy (second course), commercial law (second course), judicial proceedings (second course), forensic practice (first course).

Fifth year: Administrative law, private international law, medical law, forensic practice (second course).

A general examination and the writing of a thesis are obligatory for all students who desire to graduate from the legal course. The general examinations for obtaining the degrees doctor in law and social science, which indicate completion of the law course, are divided into three parts: (1) A theoretical examination in civil, commercial, and penal laws, which lasts an hour. (2) A practical examination in the composition of legal documents, which lasts two hours, and one-half hour's ex-

amination in the studies pursued in legal proceedings and forensic practice. (3) A thesis upon a theme selected from the four to twelve subjects suggested by the dean of the faculty, this thesis not to be longer than fifty printed pages.

In the university the degree of licentiate is only recognized by a simple certificate indicating the following of a certain course of study. The council of higher instruction can require an entire completion of the course before the degree of doctor is allowed. The university also confers the degree of bachelor when the proper examinations have been passed and a thesis written. The preponderance of students in 1889 was found among those studying civil law (136), while only 7 were studying administrative laws. The general average was between 30 and 50 students in the various legal branches.

K. Argentine Republic.—Legal education in the Argentine Republic is given in the two universities of Cordoba and Buenos Ayres. The "Universidad Nacional de Córdoba" was founded in 1622 (its legal faculty created in 1767), and the "Universidad Nacional de Buenos Aires" on August 9, 1821. The national laws give the most complete autonomy to each university. Both universities have faculties of law and social sciences, of medicine, of physical and mathematical sciences. The courses in the faculties of law and social sciences last five years, and the studies comprise preparatory legal studies, civil law, international law, Roman law, criminal law, commercial law, constitutional and administrative law, ecclesiastical law, procedure, political economy, finances, philosophy of law and mining, legislation (independent course).

Each branch is in charge of a single professor, except civil and international law (public and private), which have each two professors. The number of law professors in the faculty of law and social science is 15 in each university. The term commences on the first Monday of March and terminates on the 15th of November. The special examinations last till the middle of the month following. The general examinations are divided into three parts, commencing with the 15th of February. All the faculties require for admission a certificate of six preparatory years in the national colleges, so that the majority of pupils entering the university are from 16 to 20 years of age.

The lessons, generally, are in the form of conferences, the pupils are questioned, and are oftentimes requested to present any difficult points which they may have encountered, while other students give the benefit of their views on the subject under consideration. The "Memoria del Ministro de Justicia, culto é Instrucción Pública, 1890," presents the following facts for the year 1889-'90. In 1889 the university at Cordoba had 46 students in the faculty of law and social science, and 929 lectures were given. The number of diplomas given was 2 as doctor of jurisprudence, and 2 as lawyer. The new plan of studies, sanctioned by the faculty, separated finance and political economy; added two professors for lectures in civil law to the section of the philosophy of law; separated the theoretical study of procedure from the instruction and practice in code of mining laws (making the latter an independent course), and added a course in the philosophy of law to the fifth year.

The examinations at the close of each term, according to decision of the faculty on August 19, 1889, were to be as follows:

First term: Civil, Roman, penal, and commercial law, procedure and private international law. Second term: Canonical law, public international law, constitutional law, political economy, finances, philosophy of law, administrative law, and preparation for law study. Third term: Forensic practice.

In the university at Buenos Ayres the number of students for 1889 in the faculty of law and social sciences was 238—i. e., first year 114, second year 47, third year 30, fourth year 42, fifth year 5. In addition there were 33 "hearers." The number of lectures was 996, or an average of 71.14 for each professor. The large number of students at this younger university, as compared with that of Cordoba, is due to the fact that the university is situated at the capital of the Republic, which city has

400,000 inhabitants, while Cordoba has only about 40,000, and life in a small city has not as many attractions for the student.

The diplomas given at Buenos Ayres were 40 to law graduates and 37 to doctors in jurisprudence. The course of study is referred to above, and doubtless does not differ much from that presented for the older university.

L. *Chile*.—According to the “Memoria del Ministro de Justicia é Instruccion Publica, 1890,” the University of Chile, which now constitutes the university section of the “Instituto Nacional” at Santiago, had the following number of law students in its courses in 1889: First year of the course, 116 students and 47 “hearers;” second year, 94 students; third year, 79 students; fourth year, 53 students and 1 “hearer;” fifth year, 47 students; special classes, 159 students; total, 584 students and 48 “hearers.”

The examination in the law faculty brought about the following result: Passed with high honors, 105; passed, 1,238; failed to pass, 250; total, 1,593. Receiving university degrees: Bachelor in law, 68; licentiate in law, 76.

The studies in the faculty of laws and political sciences were as follows:

First year: Natural law, Roman law, civil code (first year).

Second year: Civil code (second year), canonical law, political economy.

Third year: Civil code, international law, penal code.

Fourth year: Forensic practice, commercial law, constitutional law.

Fifth year: Forensic practice, mining law (from March to July), criminal code and practice (August to December), administrative law.

Such is the course as at present constituted, but able writers state that this course is not considered quite satisfactory, as comparative law, history of law, and political sciences receive but little attention. For this reason the minister of public instruction, Sr. D. Julio Bofnados Espinosa, presented a new plan of studies to the council of public instruction at date of April 29, 1889, for, as he aptly said, the present course lacks a scientific basis. Whether the course suggested will be carried out remains to be seen. It aims to give greater insight into the laws of all countries, and includes history of law and political sciences, fundamentals of comparative law, statistical and geographical economics, maritime laws, parliamentary and political history of Chile and America, and sociology.

IV.—JAPAN.

In order to understand the course of legal education offered in the Japanese University, it seems necessary to preface it by an exposition of the legal institutions and conditions of that country. We quote Basil Hall Chamberlain's “Things Japanese” (London, 1890):

“Dutifully obedient to authority and not naturally litigious, the Japanese are nevertheless becoming a nation of lawyers. No branch of study is more popular than law with the young men of the new generation. It seems to have for them a sort of abstract and theoretical interest, for Japanese law has at no time been the genuine outcome of the national life, as English law, for instance, is the outcome of English national life—a historical development fitting itself to the needs of the nation as a well-made glove fits the hand. Twelve hundred years ago Japan borrowed Chinese law wholesale. She is borrowing French and German law wholesale to-day. There are now two parties, a procodification party and an anticodification party. The former is the party in power, being backed by the statesmen who see in European codes for Japan a prerequisite of fair treatment of Japan by European nations. The point of view of the anticodification party is: “Japan for the Japanese. Our laws must suit our people. They must not be mere handles for obtaining treaty revision. Wait to codify until the national courts, interpreting national

needs, shall have evolved precedents of their own. French and German codes are alien things, mechanically superimposed on our Japanese ways of thought and modes of life, which are not in touch with foreign civilizations and the laws that have sprung from them."

Which of these parties is in the right? The anticodification party finds itself on history, on natural development. On the other hand, might it not be plausibly argued that wholesale imitation and the adoption of foreign ways having always been Japan's method of proceeding, and being therefore a sort of inverted originality of her own, the procodificationists are, in effect, more truly inheritors of the national tradition than the so-called nationalists? It is, of course, out of the question that any opinion we, as ignorant laymen, may hold on such a subject can be worth anything. Our only object is to present both sides, and to present them briefly.

The new codes resulting from the legislative activity of the present reign are: (1) The criminal code and the code of criminal procedure, drafted by M. Boissonnade de Fontarabie on the basis of the Code Napoleon, with modifications suggested by the old Japanese criminal law; these were published in 1880 and came into force in 1882; (2) the civil code, the code of civil procedure, and the commercial code, which are on the eve of publication. Though not actually entitled codes, we may also include: (3) The constitution with its attendant laws regarding the imperial house, the diet, and finance; (4) the laws for the exercise of local self-government, and (5) divers statutes on miscellaneous subjects, one of the most important of which is banking.

Crimes, as classified in the Japanese criminal code, are of three kinds, namely, (1) crimes against the state or the Imperial family, and in violation of the public credit, policy, peace, health, etc.; (2) crimes against person and property; (3) police offenses. There is in addition a subdivision of (1) and (2) into major and minor crimes.

The punishment for major crimes are: (1) death, by hanging; (2) deportation, with or without hard labor, for life or for a term of years; (3) imprisonment, with or without hard labor, for life or for a term of years. The punishment for minor crimes includes confinement, with or without hard labor, and fines. The punishments for police offenses are detention for from one to ten days without hard labor, and fines varying from 5 *sen* to \$1.95. The court which tries persons accused of major crimes consists of three judges, that for minor crimes of one judge, and that for police offenses of one *juge de paix**. Capital punishments are carried out in the presence of a procurator. They now are extremely rare. Criminals condemned to deportation are generally sent to the Island of Yezo, where they sometimes work in the mines. The ordinary prisons are situated in various parts of the Empire, and number one hundred and ninety-three.

A person who has suffered injury by crime lodges his complaint at a police office, or with the procurator of any court having jurisdiction over the crime in question. Policemen can arrest an offender whose crime was committed in their presence, or which the complainant avers to have actually seen committed. In all other cases they can arrest by warrant only. Bail is allowed at the discretion of the judge, but only after reference to the procurator who has taken up the case. Accused persons are often kept in prison for a considerable time before trial, and no lawyer is allowed to be present at the preliminary examination, which also is often long delayed. February, 1890, witnessed the passing of a new law relative to the organization of judicial courts—a law embodying, indeed, the usage developed since the establishment of the courts in 1872, but introducing certain changes borrowed rather from German than from French sources. It is to come into force in November of the same year.

* The system being French, it seems advisable to retain the French terms in cases where there is no exact or no generally current English equivalent.

The history and nature of modern Japanese legal institutions are, very briefly, as follows: Down to 1872 the judicial department had united in itself the functions of chief law court and chief executive office for the transaction of judicial business throughout the land, the same staff of officials serving for both purposes. In that year, however, a separation took place. Judges, procurators, a judicial police for the arrest of prisoners, *aroués*, *avocats*, and notaries were established, as also separate judicial courts and a law school. The pattern copied was French. Since that time numerous changes have taken place. At present the courts are divided into local courts (presided over by *juges de paix*), district or provincial courts, courts of appeal, and a supreme court (*cour de cassation*), all of which have jurisdiction both in criminal and civil suits. Each of these courts has branch offices established to accommodate suitors, regard being had to population and to the area of jurisdiction. The local courts have jurisdiction over police offenses; the district courts over crimes, besides acting as courts of preliminary investigation; the appeal courts hear new trials; the supreme court hears criminal appeals on matters of law. All crimes of whatever sort are subjected to preliminary examination before actual trial. The conducting of criminal cases, from the very beginning down to the execution of the criminal, if he be condemned to suffer death, rests with the procurator, who unites in his own person the functions of public prosecutor and of grand jury.

The present judiciary consists partly of men trained under the old pro-European régime, partly of graduates of the law college of the Imperial University, and of the private law colleges, of which there are six in Tokyo and eight altogether in the Empire. About a thousand young men graduate yearly. Lawyers are bound to pass a certain examination before being admitted to practice at the bar; but it is of a very theoretical nature, and is likely to be soon revised. The new law concerning the constitution of courts requires candidates for judgeships to pass two competitive examinations, unless they are graduates of the university, in which case they need only pass the second of the two, after having served as probationary judges for a term of three years. Judges are appointed for life. Their salaries vary from \$700 to \$4,000 per annum. The presidents of courts are, however, more highly remunerated. The president of the supreme court receives \$5,500, and is of *shinnin* rank.* The chief procurator, who is of *chokunin* rank, receives \$4,000.

The system of trial, as well in civil as in criminal cases, is entirely inquisitorial. It was so in Old Japan, and is so in France, whence modern Japanese law comes. Formerly no convictions were made except on confession by the prisoner. Hence an abundant use of torture, now happily abolished, and a tendency, even in civil cases, to suspect guilt in the defendant, although the theory is that the defendant must be presumed innocent until actually proved to be the contrary. In this characteristic Japan but conforms to her continental models, and indeed to the universal usage of mankind, with the solitary exception of the English. The judge conducts the trial alone. All questions by counsel must be put through him. Counsel do not so much defend their clients as represent them. They even testify for their clients, strange as such a thing must sound to English ears. Another peculiarity is that husband and wife, parent and child, master and servant are prohibited from appearing as witnesses against each other. At the same time, they are not entirely excluded from the examination. The code of criminal procedure draws a fine distinction, excluding them as witnesses, but admitting them as "referees"—we can think of no better equivalent for the difficult Japanese term *sankōnin*. A *sankōnin* is a witness, and yet not an authoritative witness, a sort of second-rate witness, if one might so phrase it. The idea is, of course, that persons thus related are likely to be prejudiced in each other's favor, and that their testimony should accordingly be allowed little

*All officials are classified into four ranks, *shinnen*, *chokunin*, *sonin*, and *hannin*. The *shinnin* are the highest of all, receiving their nominations from the Mikado himself.

weight in comparison with that of others more probably impartial. Witnesses are sworn, though not exactly in the European manner. The oath is rather a solemn asservation, and is entirely unconnected with any religious sanction. It is in the form of a written document, to which the person sworn affixes his seal. The proceedings at a trial are all committed to writing, but not in the actual words used, as Japanese custom is adverse to the employment of the colloquial for literary purposes. The gist of the questions and answers is therefore translated into the book style.

Needless to say that the above is the merest shadowy outline of a vast subject. Transformed, revolutionized as it has been, Japanese law nevertheless retains not a few curious features of its own, which would interest both the legal specialist and the student of history and sociology. In departments of legal activity that are not yet covered by the new codes, the customary law of an earlier date is still followed. Land tenure and all such family matters as succession, marriage, adoption, etc., in which it is most difficult to effect sudden changes, belong to this category.

Since the foregoing was printed three new codes appeared, namely, the civil code, the code of civil procedure, and the commercial code. The new civil code, however, includes as yet only the laws of things. Traditional Japanese usage still regulates such important matters as marriage, succession, adoption, and others belonging to the law of persons. The code of civil procedure and the commercial code came into force on January 1, 1891, the civil code on January 1, 1892.

Legal education in Japan.—After having seen how Japan endeavors to copy the law practice of European nations, we may proceed to show that in the preparation for the profession of law also European models are copied. It will be seen from the following statements that the Japanese have avoided English and American models and apply the courses found in the universities on the continent of Europe, although they study English law thoroughly.

The Imperial University at Tokyo is the chief place where legal studies can be pursued in Japan. This institution has a college of law with 26 professors and 333 students (according to University Calendar 1891-92). The university is under the control of the minister of education and depends for its revenue upon annual allowances from the treasury of the Imperial Government. The tuition fees (2½ yen, or about \$2 per month) and other sources of income are allowed to accumulate year by year so as to form a large fund, which is touched only in cases of necessity. The university confers among other degrees that of *hōgaka hakushi*, or doctor of law, after completion of the entire course prescribed.

The courses of study in the different faculties of the Imperial University are all very comprehensive and stated in detail. Those of the law college being of particular interest to the readers of this volume we quote them in full, giving both the subjects taught and the time allotted to each. The law college offers two courses, one in law and one in politics. To the course in law are added subsidiary courses or sections, namely, in English, French, and German law, to be studied in those languages, respectively.

I.—*Law course.*

	Hours per week.		
	First term.	Second term.	Third term.
FIRST YEAR.			
General law	1	1	1
Civil code (Property in General, Part I).....	3	3	3
Criminal code	4	4	4
Roman law	4	4	4
Civil code	2	2	2
First subsidiary section:			
English law of contract.....	4	4	4
English law of torts	2	2	2
Second subsidiary section:			
French law (general).....	4	4	4
Third subsidiary section:			
History of German law	2	2	2
Pandekten law	3	3	3
SECOND YEAR.			
Civil code (Property in General, Part II).....	4	4	4
Code of criminal procedure.....	3	3	3
Civil code	2	2	2
Constitution	3	3	3
Public international law	2	2	2
Exercises in civil and criminal pleadings			
First subsidiary section:			
English law of property	2	2	2
English commercial law	4	4	4
Second subsidiary section:			
French law (general).....	4	4	4
Third subsidiary section:			
Practical exercises in pandekten law	3	3	3
German private law	2	2	2
THIRD YEAR.			
Civil code:			
Law of the means by which property is acquired.....	3	3	3
Securities or guarantees of rights of claims	2	2	2
Evidence and prescription.....	2	2	2
Law of persons.....	2	2	2
Criminal code	2	2	2
Administrative law	4	4	4
Exercises in civil and criminal pleadings			
First subsidiary section:			
English commercial law	2	2	2
English law of procedure.....	2	2	2
English law of evidence	2	2	2
Second subsidiary section:			
French law (civil and administrative laws)	2	2	2
History of French law	2	2	2
Third subsidiary section:			
German commercial law	3	3	3
Exercises in pandekten law	1	1	1
FOURTH YEAR.			
Commercial code.....	5	5	5
Judicial organization and code of civil procedure.....	4	4	4
Private international law	3	3	3
Jurisprudence.....	2	2	2
Criminal code	2	2	2
History of legal institutions of Japan.....	2	2	2
Exercises in civil and criminal pleadings.....			
First subsidiary section:			
English law of equity	3	3	3
Second subsidiary section:			
French law (civil and commercial law).....	2	2	2
History of French law	2	2	2
Third subsidiary section:			
German public and administrative laws.....	3	3	3
German bankruptcy law	1	1	1

II.—*Course in politics.*

	Hours per week.		
	First term.	Second term.	Third term.
FIRST YEAR.			
Politics	2	2	2
Political economy	3	3	3
Statistics	1	1	1
History of institutions	3	3	3
History of politics	3	3	3
English, French, and German constitutions	3	3	3
SECOND YEAR.			
Constitution	3	3	3
Political economy	5	5	5
Administrative law	3	3	3
Public international law	3	3	3
Civil code	3	3	3
Criminal code	4	4	4
THIRD YEAR.			
Political economy	3	3	3
History of political economy	2	2	2
Administrative law	3	3	3
Civil code	2	2	2
Commercial code	2	2	2
Sociology	2	2	2
FOURTH YEAR.			
History of legal institutions of Japan	2	2	2
Political economy and seminary exercises in political economy	3	3	3
History of political economy	2	2	2
Administrative law	2	2	2
Law of administrative justice	2	2	2
Political economy	3	3	3
Private international law	3	3	3

The College of Law has had 307 graduates since 1876, the date of its foundation—106 are now in administrative offices, 114 are law officers, 9 are teachers in secondary schools, 5 are members of the house of representatives, 2 are principals of private schools, 5 are bank employés, 3 employés of private companies, 14 are practicing lawyers, 3 are students of University Hall, 12 students in foreign countries, 1 is a voluntary conscript for one year, of 20 the occupation is unknown, while 13 are deceased.

The average age of the students in the College of Law at date of graduation was 24 years 8 months in 1889; in 1890 it was 24 years 10 months; and in 1891 it was 25 years.

Nothing is said in the university calendar of the methods of instruction followed.

V.—CHINA.

To the questions submitted to foreign institutions Hon. Charles Denby, United States minister to China, to whom a copy was sent, replied under date of January 8, 1892, from Peking, as follows:

"I have the honor to acknowledge the receipt of your communication of the 14th of November, last. Being a lawyer by profession, and acknowledging the debt that I owe to the bar, it will afford me the greatest pleasure to answer the questions transmitted by you.

"An answer, *seriatim*, is not necessary, because there are no lawyers in China, and consequently no school or institution such as are inquired about. Lawyers are not permitted to appear in Chinese courts. There are several lawyers at Shanghai who practice in the mixed court, Her Britannic Majesty's court, and the consular courts. The mixed court is peculiar to Shanghai and is held by a Chinese magistrate and a

member of one of the consulates. The foreign lawyers are all Englishmen and are admitted to the bar before coming to China. There is no American practicing law in China. There is a species of legal writer who prepares papers to be filed in the courts. His standing is low and he is considered to be disreputable. In the civil and criminal courts there is no appearance by attorney. There are no regular forms of pleading. The disputations of the parties are oral.

"The consuls have civil and criminal jurisdiction over their own fellow nationals. The proceedings are conducted according to the law of the nationality of the consul. The law of the United States is administered in the consular courts. Of course, this law may be modified by custom, which must be proved like any other fact. The Revised Statutes define the law governing the consular courts as being the statutory law of the United States, equity, admiralty, and the common law. This system is very incomplete. There is no common law applicable to crimes in the United States, and there are few United States statutes defining crimes. The States have their own codes. The consuls and minister are sometimes worried as to the sources of their power, but we usually manage to find authority in the common law.

"There should be a code of laws applicable to the East, to islands, and to savage countries. It would not be difficult of preparation and it would relieve consuls from much doubt and annoyance."

CHAPTER XVI.

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CHAPTER XVII.

COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS.¹

INTRODUCTORY STATEMENT.

The act of the Fifty-first Congress of the United States, approved August 30, 1890, providing for the more complete endowment of colleges of agriculture and the mechanic arts, has served to call the attention of the public more directly to these institutions for the agricultural and industrial education of our youth, and to secure for them that recognition and confidence as an integral part of our educational system to which their breadth of purpose and the general efficiency of their organization have long entitled them. But few will be found who are disposed to question the wisdom of the General Government in thus finally and definitely reserving to the people the benefits of a system for the establishment of which no inconsiderable amount of the public funds had already been expended and whose success or failure seems destined in no slight degree to affect the industries of the country. This act is but another illustration of that enlightened national policy which sees in the higher education of the citizen the strongest bulwark of individual liberty and the greatest safety to government itself.

It is a fact, not to be denied, that for several reasons, until recently, the agricultural and mechanical colleges, with a few notable exceptions, have not wholly fulfilled the hopes entertained for them by their founders, and this has undoubtedly been due in part to a lack of information on the part of the public as to their facilities and their work; in some cases to a lack of understanding, if not a total misunderstanding, of their true objects and aims, and, in consequence, there has been a dearth of interest in their welfare on the part of the communities in which they were established. This failure of appreciation has clearly impeded their usefulness and retarded their growth.

It were well indeed, if the fact could be more widely recognized, that these colleges are essentially and peculiarly public institutions; few establishments in this country can more truly be said to belong to the people. While it is true that in some instances private donations and bequests have made the State agricultural and mechanical college practically independent of Government aid, yet these are rare exceptions to the general rule. In the majority of the States the money received for the college or colleges from the General Government forms by far the greater part of their endowment fund; and it is not too much to say, that of all such colleges now in existence in the United States, there are none which would not be able to continue upon a fair working basis

¹Prepared for the Bureau of Education by Prof. R. H. Alvey, of the Maryland College of Agriculture and the Mechanic Arts.

if all other funds available for purposes of instruction were withdrawn. This statement, however, is not to be taken as ignoring in any way the very material assistance given by the States to these institutions. It is only by the consent of the several States that the colleges exist at all; and only through the fostering care and the generous policy of the State legislatures, have many of those which were established before or immediately after the first endowment act of Congress, in 1862, survived to enjoy the benefits derived from the endowment act of 1890. Thus there is a two-fold reason why the people should regard these colleges with distinct favor, and guard their interests with jealous pride—they are State as well as national institutions.

Indeed the State agricultural college may often claim to be regarded as the crowning point of the public school system. In many of the States this position has, in truth, been accorded them, in connection with the State universities. It is possible by a system of accredited high schools, whose graduates are admitted to the State college upon certificate, and by the maintaining of district scholarships, as is frequently done, to so connect the college with the schools, that a fairly large percentage of those who pass through the successive grades of the public schools shall be enabled to continue their education in these higher institutions. But it is argued that the arrangement of the college work to follow by natural and logical sequence the course of study pursued in the high schools, would imply a lowering of the standard of admission. In the first place, this does not necessarily follow, as the experience of Indiana and Michigan, which have fairly tried the plan, will testify. The first effect of such a continuity of work is to *raise* the standard of the *high school*. Again it is a question whether some of our endowed colleges have not lost sight of the fact, that the real *raison d' être* of their endowment, is to make possible the higher industrial education of those whose preparation must necessarily be limited to such instruction as the public school affords. The terms of the acts of Congress are express and unmistakable upon this point. It was to meet the needs of those to whom a course at the average college and university was as impracticable as it was unsatisfactory, that these liberal donations on the part of the General Government were made, and to them peculiarly should the advantages and benefits of these schools be accessible.

Congress, by acts passed in 1862 and 1890 (the text of which is subsequently given in this chapter), has made provision for the establishment and support, in coöperation with the States, in every State and Territory of the Union, of at least one institution, whose leading object shall be to provide instruction in agriculture and the mechanic arts. In some of the States two institutions—one for white and one for colored students—are thus maintained, although, as will be more fully explained, all of the schools for colored students are not recognized as distinct and independent organizations. At present sixty colleges so endowed are in active operation. The following is a list of these by States:

Institutions designated as beneficiaries of Congressional endowment acts.

LIST CORRECTED TO JUNE, 1893.

State.	Name of institution.	Race.	Location.
Alabama.....	Alabama Polytechnic Institute	White	Anbnrn.
Arizona	State Normal and Industrial School.....	Colored	Normal P. O.
Arkansas.....	University of Arizona—Agricultural College.		Tucson.
California	Industrial University.....	White	Fayetteville.
Colorado.....	Branch Normal College	Colored	Pine Bluff.
Connecticut	University of California—Agricultural College.		Berkeley.
Delaware	State Agricultural College.....		Fort Collins.
Florida	Sheffield Scientific School of Yale University.		New Haven.
Georgia.....	Delaware College	White	Newark.
Idaho.....	Agricultural College.....	Colored	Dover.
Illinois.....	State Agricultural College.....	White	Lake City.
Indiana.....	State Normal School	Colored	Tallahassee.
Iowa.....	State Agricultural and Mechanical College of University of Georgia.	White	Athens.
Kansas.....	Industrial College of University of Georgia.	Colored	Savannah.
Kentucky	University of Idaho		Moscow.
Louisiana.....	University of Illinois—Agricultural College.		Champaign.
Maine.....	Purdue University—Agricultural and Mechanical College.		Lafayette.
Maryland	Iowa Agricultural College		Ames.
Massachusetts	State Agricultural College		Manhattan.
Michigan.....	Agricultural and Mechanical College.....	White	Lexington.
Minnesota.....	State Normal College	Colored	Frankfort.
Mississippi.....	State University—Agricultural College	White	Baton Rouge.
Missouri.....	Southern University	Colored	New Orleans.
Montana.....	State College of Agriculture and Mechanic Arts.		Orono.
Nebraska.....	Maryland Agricultural College	White	College Park.
Nevada.....	Eastern Branch of Maryland Agricultural College.	Colored	Princess Anne.
New Hampshire.....	Massachusetts Agricultural College.....		Amherst.
New Jersey.....	Institute of Technology		Boston.
New Mexico.....	State Agricultural College.....		Lansing.
New York.....	College of Agriculture of University of Minnesota.		Minneapolis.
North Carolina.....	Agricultural and Mechanical College	White	Agricultural College.
Ohio.....	Alcorn Agricultural and Mechanical College.	Colored	West Side.
Oklahoma.....	College of Agriculture and Mechanic Arts of University of Missouri.	White	Columbia.
Oregon.....	Lincoln Institute	Colored	Jefferson City.
Pennsylvania.....	University of Montana.....		Bozeman.
Rhode Island.....	University of Nebraska—Industrial College.		Lincoln.
South Carolina.....	State University—Agricultural College.....	White	Reno.
Tennessee.....	College of Agriculture and Mechanic Arts.		Hanover.
Texas.....	Rutger's Scientific School.....		New Brunswick.
Utah.....	Agricultural College.....		Las Cruces.
Vermont.....	Agricultural College of Cornell University.		Ithaca.
Virginia.....	Agricultural College.....	White	Raleigh.
Washington.....	Shaw University	Colored	Raleigh.
West Virginia.....	Agricultural College.....		Fargo.
Wisconsin.....	State University—Agricultural College.....		Columbus.
Wyoming.....	Agricultural and Mechanical College.....	White	Stillwater.
	State Agricultural College.....		Corvallis.
	State College.....		State College P. O.
	Brown University		Providence.
	Clemson College.....	White	Fort Hill.
	Clafin University	Colored	Orangeburg.
	Agricultural College.....		Brookings.
	Agricultural College of University of Tennessee.	White	Knoxville.
	Department for Colored Students of University of Tennessee.	Colored	Knoxville.
	Agricultural and Mechanical College.....	White	College Station.
	Prairie View Normal School	Colored	Hempstead.
	Agricultural College.....		Logan.
	Agricultural College of University of Vermont.		Burlington.
	Agricultural and Mechanical College.....	White	Blacksburg.
	Hampton Normal Institute	Colored	Hampton.
	State Agricultural College and School of Science.		Pullman.
	University of West Virginia—Agricultural College.	White	Morgantown.
	West Virginia Institute	Colored	Farm P. O.
	University of Wisconsin—Agricultural and Mechanical College.		Madison.
	University of Wyoming—Agricultural and Mechanical College.		Laramie.

In Montana no college meeting the requirements of the acts of Congress has as yet been established; in Rhode Island litigation has arisen as to the beneficiary; in South Carolina there is a controversy respecting the division of the fund between the races.

LAWS OF THE UNITED STATES RELATING TO COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS AND TO AGRICULTURAL EXPERIMENT STATIONS.

In 1862 the first act of Congress providing for the endowment of colleges of agriculture and mechanic arts was approved by the President and became a law. This act is popularly referred to as "The first Morrill act," in honor of Senator Justin S. Morrill, of Vermont, who assisted in its preparation and presented the bill in Congress, or simply as the "Land-grant act of 1862." As the latter name implies, it provides for the donation to the several States of certain public lands of the United States in place or scrip—30,000 acres for each Senator and Representative in Congress to which they were respectively entitled under the census of 1860—the proceeds from the sale of which, invested in stocks yielding not less than 5 per cent interest, were to form permanent endowment funds for the support and maintenance of colleges of agriculture and the mechanic arts, under certain conditions set forth in the act. The act reads as follows:

THE LAND GRANT ACT OF '62.—"THE FIRST MORRILL ACT."

AN ACT donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That there be granted to the several States, for the purposes hereinafter mentioned, an amount of public land, to be apportioned to each State, a quantity equal to 30,000 acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of 1860: *Provided,* That no mineral lands shall be selected or purchased under the provisions of this act.

SEC. 2. *And be it further enacted,* That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections, not less than one-quarter of a section; and wherever there are public lands in a State, subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands, within the limits of such State; and the Secretary of the Interior is hereby directed to issue to each of the States, in which there is not the quantity of public lands subject to sale at private entry, at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share; said scrip to be sold by said States, and the proceeds thereof applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever: *Provided,* That in no case shall any State to which land scrip may thus be issued, be allowed to locate the same within the limits of any other State, or of any territory of the United States; but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry, at one dollar and twenty-five

cents, or less, an acre: *And provided further*, That not more than one million acres shall be located by such assignees in any one of the States: *And provided further*, That no such location shall be made before one year from the passage of this act.

SEC. 3. *And be it further enacted*, That all the expenses of management, superintendence and taxes from date of selection of said lands, previous to their sales, and all expenses incurred in the management and disbursement of moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the Treasury of said States, so that the entire proceeds of the sale of said lands shall be applied, without any diminution whatever, to the purposes hereinafter mentioned.

SEC. 4. *And be it further enacted*, That all moneys derived from the sale of the lands aforesaid, by the States to which the lands are apportioned, and from the sales of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks, yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished, except so far as may be provided in section fifth of this act, and the interest of which shall be inviolably appropriated, by each State, which may take and claim the benefit of this act, to the endowment, support, and maintenance of, at least, one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

SEC. 5. *And be it further enacted*, That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First, If any portion of the fund invested, as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum, not exceeding ten per centum upon the amount received by any State under the provisions of this act, may be expended for the purchase of lands for sites or experimental farms whenever authorized by the respective Legislatures of said States;

Second, No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair, of any building or buildings;

Third, Any State which may take and claim the benefit of the provisions of this act shall provide, within five years, at least not less than one college, as prescribed in the fourth section of this act, or the grant to such State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid;

Fourth, An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their costs and results, and such other matters including State industrial and economical statistics, as may be supposed useful; one copy of which shall be transmitted by mail free, by each, to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior;

Fifth, When lands shall be selected from those which have been raised to double the minimum price in consequence of railroad grants, they shall be computed to the States at the maximum price, and the number of acres proportionally diminished;

Sixth, No State, while in a condition of rebellion or insurrection against the government of the United States, shall be entitled to the benefit of this act;

Seventh, No State shall be entitled to the benefits of this act, unless it shall express its acceptance thereof by its Legislature within two years from the date of its approval by the President.*

SEC. 6. *And be it further enacted*, That land scrip issued under the provisions of this act shall not be subject to location until after the first day of January, 1863.

SEC. 7. *And be it further enacted*, That land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bountyland warrants under existing laws; *Provided*, That maximum compensation shall not be thereby increased.

SEC. 8. *And be it further enacted*, That the Governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds. Approved July 2, 1862.

In 1887 the act known as the "Hatch experiment station act," so called in honor of Representative Wm. H. Hatch, of Missouri, was approved, and by the Fiftieth and Fifty-first Congresses supplementary provisions were added thereto. The following is the text of the act and of the regulations for franking bulletins and reports:—

THE HATCH EXPERIMENT STATION ACT.

[Forty-ninth Congress, Session 2, Chapter 314, March 2, 1887.]

AN ACT to establish agricultural experiment stations in connection with the colleges established in the several States under the provisions of an act approved July second, eighteen hundred and sixty-two, and of the acts supplementary thereto.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges, or agricultural department of colleges, in each State or Territory established, or which may hereafter be established in accordance with the provisions of an act approved July second, eighteen hundred and sixty-two, entitled "An act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanic arts," or any of the supplements of said act, a department to be known and designated as an "agricultural experiment station:" *Provided*, That in any State or Territory in which two such colleges have been or may be so established, the appropriation hereinafter made to such State or Territory shall be equally divided between such colleges, unless the legislature of such state or territory shall otherwise direct.

SEC. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify the experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United

States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective state or territories.

SEC. 3. That in order to secure as far as practicable uniformity of methods and results in the work of said stations it shall be the duty of the United States commissioner of agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate, from time to time, such lines of inquiry as to him shall seem most important; and in general, to furnish such advice and assistance as will best promote the purposes of this act. It shall be the duty of each of said stations annually, on or before the first day of February, to make to the governor of the state or territory in which it is located, a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the said commissioner of agriculture, and to the secretary of the treasury of the United States.

SEC. 4. That bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the States and territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports, and the annual reports of said stations, shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the postmaster general may from time to time prescribe.

SEC. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results as hereinbefore prescribed, the sum of \$15,000 is hereby appropriated to each State to be specially provided for by Congress in the appropriations from year to year, and to each territory entitled under the provisions of section eight of this act, out of any money in the treasury proceeding from the sales of public lands, to be paid in equal quarterly payments on the first day of January, April, July and October in each year, to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same, the first payment to be made on the first day of October, 1887: *Provided, however,* That out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five per centum of such annual appropriation may be so expended.

SEC. 6. That whenever it shall appear to the secretary of the treasury from the annual statement of receipts and expenditures of any of said stations, that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the next succeeding annual appropriation to such station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

SEC. 7. That nothing in this act shall be construed to impair or modify the legal relation existing between any of the said colleges and the government of the States or Territories in which they are respectively located.

SEC. 8. That in States having colleges entitled under this section to the benefits of this act, and having also agricultural experiment stations established by law separate from said colleges, such States shall be authorized to apply such benefits to experiment stations so established by such States; and in case any State shall have established, under the provisions of said act of July second, aforesaid, an agricultural department or experimental station in connection with any university, college or institution not distinctively an agricultural college or school, and such State shall have established, or shall hereafter establish a separate agricultural college or school, which shall have connected therewith an experimental farm or station, the Legislature of such State may apply in whole or in part the appropriation by this act made to such separate agricultural college or school; and no Legislature shall, by contract express or implied, disable itself from so doing.

SEC. 9. That the grants of money authorized by this act are made subject to the Legislative assent of the several States and territories to the purpose of said grants: *Provided*, That payment of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature meeting next after the passage of this act, shall be made upon the assent of the Governor thereof duly certified to the secretary of the treasury.

SEC. 10. Nothing in this act shall be held or construed as binding the United States to continue any payments from the treasury to any or all the States or institutions mentioned in this act, but Congress may at any time amend, suspend or repeal any or all of the provisions of this act.

[Fiftieth Congress, Session 2, chapter 373, Mar. 2, 1889.]

In the appropriation for experiment stations it is *Provided*, That as far as practicable, all such stations shall devote a portion of their work to the examination and classification of the soils of their respective States and Territories, with a view to securing more extended knowledge and better development of their agricultural capabilities.

[Fifty-first Congress, Session 1, Chap. 707, July 14, 1890.]

In the appropriation for Agricultural Experiment Stations it is provided that the sums appropriated to the several States shall be paid quarterly, in advance.

FRANKING BULLETINS AND REPORTS.

SEC. 419. Postal laws and regulations. Regulations for free transmission of bulletins and reports under the preceding statute, are prescribed as follows:

1. Any claimant of the privilege must apply for authority to exercise it to the Postmaster-General, stating the date of the establishment of such station, its proper name or designation, its official organization and the names of its officers, the name of the university, college, school, or institution to which it is attached, if any, the legislation of the State or Territory providing for its establishment, and any other granting it the benefits of the provision made by Congress as aforesaid (accompanied by a copy of the act or acts), and whether any other such station in the same State or Territory is considered, or claims to be, also entitled to the privilege; and also the place of its location and the name of the post-office where the bulletins and reports will be mailed. The application must be signed by the officer in charge of the station.

2. If such application be allowed after examination by the Department, the postmaster at the proper office will be instructed to admit such bulletins and reports to the mails in compliance with these regulations, and the officer in charge of the station will be notified thereof.

3. Only such bulletins or reports as shall have been issued after the station became entitled to the benefits of the act can be transmitted free; and such bulletins or reports may be inclosed in envelopes or wrappers, sealed or unsealed. On the exterior of every envelope, wrapper or package, must be written or printed the name of the station and place of its location, the designation of the inclosed bulletin or report, and the word "Free" over the signature or fac simile thereof of the officer in charge of the station, to be affixed by himself, or by some one duly deputed by him for that purpose. There may also be written or printed upon the envelope or wrapper, a request that the postmaster at the office of delivery will notify the mailing station of the change of address of the addressee, or other reason for inability to deliver the same; and upon a bulk package, a request to the postmaster to open and distribute the "franked" matter therein, in accordance with the address thereon.

Bulletins published by the United States Department of Agriculture, and analogous to the station, and entitled to be mailed free under the penalty envelope of that

department, may also be adopted and mailed by the several stations, with their own publications, under the same regulations; and any bulletins or reports mailable free by any Agricultural Experiment Station under these regulations, may be so mailed by any other station having free mailing authority.

If such station's annual reports be printed by State authority, and consist in part of matter relating to the Land Grant College to which such station is attached, then said report may be mailed free entire, by the director of the Station: *Provided*, In his judgment, the whole consists of useful information of an agricultural character.

The bulletins may be mailed to the stations, newspapers, or persons to whom they are by the foregoing act authorized to be sent, and the annual reports to any address within the United States.

On August 30, 1890, the last provision made by Congress in aid of colleges of agriculture and the mechanic arts was approved. This act, which may be called the Additional Endowment of 1890, or the "Second Morrill act," receiving its name from the same distinguished gentleman, is intended as supplementary to the land grant of 1862, and is as follows:

ADDITIONAL ENDOWMENT OF 1890

[Fifty-first Congress, Session 1, Chapter 841, Aug. 30, 1890.]

AN ACT to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July second, eighteen hundred and sixty-two.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, annually appropriated, out of any money in the Treasury not otherwise appropriated, arising from the sale of public lands, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established, in accordance with an act of Congress approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of one thousand dollars over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be twenty-five thousand dollars to be applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction: *Provided*, That no money shall be paid out under this act to any State or Territory for the support and maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this act if the funds received in such State or Territory be equitably divided as hereinafter set forth: *Provided*, That in any State in which there has been one college established in pursuance of the act of July second, eighteen hundred and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue, for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the act to which this act is an amendment, the Legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this act between one college for white students and one institution for colored students established as aforesaid, which

shall be divided into two parts and paid accordingly, and thereupon such institution for colored students shall be entitled to the benefits of this act and subject to its provisions, as much as it would have been if it had been included under the act of eighteen hundred and sixty-two, and the fulfillment of the foregoing provisions shall be taken as a compliance with the provision in reference to separate colleges for white and colored students.

SEC. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of the Interior, out of the treasury of the United States, to the state or territorial treasurer, or to such officer as shall be designated by the laws of such State or Territory to receive the same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges or other institutions entitled to receive the same, and such treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior, on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement. The grants of moneys authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of the legislature meeting next after the passage of this act shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

SEC. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support, and maintenance of colleges, or of institutions for colored students, as provided in this act, shall, by any action, or contingency, be diminished or lost, or be misapplied, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings. An annual report by the president of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment station attached to said colleges, with their costs and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail free to all other colleges further endowed under this act.

SEC. 4. That on or before the first day of July in each year, after the passage of this act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory whether it is entitled to receive its share of the annual appropriation for colleges, or of institutions for colored students, under this act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid it shall be covered into the treasury. And the Secretary of the Interior is hereby charged with the proper administration of this law.

SEC. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also

whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

SEC. 6. Congress may at any time amend, suspend, or repeal any or all of the provisions of this act.

The laws of the United States relating to the detail of officers of the Army and Navy to educational institutions, and the regulations prescribed by the President and the Secretary of War in pursuance thereof, are given in a subsequent section of this report.

Before entering into the consideration of the questions involved in the construction and interpretation of these statutes, the purposes which they were respectively designed to accomplish, and the manner in which the States, in accepting their provisions, have complied with the evident objects of the acts themselves, it will be well to understand the method of their administration as adopted by the Executive Departments, under the several sections relating to the general supervisory powers retained by the Government over the distribution and expenditure of the funds thus appropriated.

It will be seen that the first endowment act of 1862 provides for the issue of land scrip to those States in which there is not the quantity of public lands, subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of the act, and that this issue of land scrip is to be made by the Secretary of the Interior, and again that one copy of the annual report of each land-grant college, as provided for in section 5 of the same act, is to be sent to the same official. The Department of the Interior was thus from the first intrusted with the carrying out of the provisions of the law. The general supervision over the Agricultural Experiment Stations, established in compliance with the Hatch act of 1887, is expressly made the duty of the then Commissioner—now Secretary—of Agriculture, a duty which will be subsequently herein referred to. The endowment act of 1890 provides, (section 2), that the funds appropriated therein shall be paid to the State or Territorial treasurer by the Secretary of the Treasury upon the warrant of the Secretary of the Interior, and again, (section 3), “an annual report by the president of each of said colleges shall be made to the Secretary of Agriculture as well as to the Secretary of the Interior, regarding the condition and progress of each college, including, etc.” In section 4 of the act it is further distinctly set forth that “the Secretary of the Interior is hereby charged with the proper administration of this law,” a duty which includes—*vide* section 5—the making of an annual report to Congress concerning the disbursements which may have been made in all the States and Territories.

After the passage of the last named act of Congress, the duty of administering the law by obtaining annually the required information from the colleges, examining their workings, and reporting upon the same, was delegated by the Secretary of the Interior to the United States Bureau of Education, which since 1870 has been conducted as

an office of the Interior Department. The letter of the Secretary of the Interior bearing date September 13, 1890, requested the Commissioner of Education to prepare a circular letter to be addressed by the Secretary to the governors of the States and Territories, for the purpose of bringing to their attention the new act of Congress and securing from them the information required by the terms of the act to enable him to put the law in operation.

The Commissioner, therefore, in compliance with the Secretary's instructions, furnished him in writing a careful discussion and explanation of the act of August 30, 1890, and submitted a draft of a letter to the governors.

The plan adopted by the Commissioner of Education in dealing with the institutions receiving aid through the Federal endowment acts has had a twofold purpose in view: First, examination into the affairs of these colleges, their organization, objects, courses of instruction, and the manner in which they have severally made use of the funds received by them from the General Government, to an extent that will enable him to judge intelligently of the manner in which they respectively meet the requirements of the acts of Congress in their arrangement of work and their disbursement of the Federal funds; secondly, to secure such data relating to the agricultural and mechanical colleges as is necessary for the preparation of a report upon their condition to the Secretary of the Interior.

As the act was approved August 30, 1890, it was apparent that not only were the States entitled to the first, but also to the second installment, of the fund for use during the fiscal year of 1890-91. In his explanation to the Secretary of the Interior, above mentioned, the Commissioner made the following statements, as the result of his consideration of the terms of the act, and made suggestions as to the amount, then due, to be paid to the States for such institutions as should be designated as beneficiaries thereunder:

Upon a careful examination of the act referred to, I find that, though passed and approved subsequent to the close of the fiscal year 1890, it appropriates to each State and Territory complying with certain conditions, the sum of \$15,000 for that year (ending June 30, 1890). The money appropriated is to be applied to the support in each State and Territory of one college of agriculture and mechanic arts, provided no distinction of race or color is made in the admission of students thereto; or to two of such colleges, one of which, either already existing or to be hereafter established, shall be for the education of colored students. Where separate colleges are maintained for the different races, the legislature may propose and report to the Secretary of the Interior a just and equitable division of the fund received between the two.

This grant is made subject to the legislative assent of the several States and Territories, but payment of such installments "as shall become due to any State before the adjournment of the regular session of the legislature meeting next after the passage of this act, shall be made upon the assent of the governor thereof duly certified to the Secretary of the Treasury.

The First Comptroller of the Treasury has decided that the installment for the fiscal year 1890, and also that for 1891, is now due and payable to each State that is entitled to receive the same. He has furnished me a copy of his opinion contained in

letters dated September 2, 1890, to Hon. J. G. Cannon, Chairman of the Committee on Appropriations, U. S. House of Representatives, and to President H. E. Alvord, of the Agricultural College of Maryland, in the following language:

"* * * Under this act for the fiscal year 1890, these several institutions will be entitled to \$15,000 for that year, and \$16,000 for the fiscal year ending June 30, 1891. The aggregate sum of \$31,000 I assume can now be paid on the proper requisition of the Secretary of the Interior under the act. As stated, I think it creates a permanent annual specific appropriation for the purpose pointed out in the act without further legislation on the part of Congress. * * *

"The fact that the act of Congress was not passed in time to make the payments provided for in the fiscal year 1890, and that an appropriation for 1891 could not be paid in the July following, does not in any manner interfere with the rights established by Congress under the appropriation. Time, in such cases, is not at all material. Congress intended to make these appropriations for the benefit of these colleges and they are entitled to have them paid now, although the time in which they might have been paid has elapsed. (To Mr. Cannon.)

"* * * You will see by reference to section 4 of this act that the Secretary of the Interior is "charged with the proper administration of this law" and he will doubtless furnish you with information as to what he will deem prerequisite to his making his warrant (requisition) on the Secretary of the Treasury as provided in section 2.

"In answer to your fourth question, I would say that the amount for the fiscal year 1890 is available now, and will be paid as soon as the Secretary shall ask for it. (To President Alvord.)"

This letter, sent by the Secretary of the Interior to the governors of the States and Territories, bore date of September 2^d, 1890, and, after calling attention to the act of Congress, requested the following information:

1. Is there in your State a college of agriculture and the mechanic arts, established under or receiving the benefit of the act of Congress of July 2, 1862?

2. If so, is any distinction of race or color in the admission of students thereto recognized or made in the State law, or in the regulations and practice of the institution?

3. Or (a) is there such a college for the education of white students, and also (b) a similar college for colored students, or an institution of like character aided by the State from its own revenue for the education of colored students in agriculture and the mechanic arts? Please give name, location, and president or administrative officer of each of such institutions.

4. Has your legislature met in regular session since August 30, 1890, or when will it so meet?

5. If it has not so met do you as authorized by the act referred to assent in behalf of your State to "the purpose of said grants," as provided in section second of the act?

6. Please give the name, title, and address of the State treasurer or other officer to whom payments should be made under this law.

You will please transmit with your reply a copy of the charter of such college, with the rules and regulations, duly certified by the secretary of state.

Upon the receipt of satisfactory replies to these inquiries, and the official assent to the terms of the act, given by the State legislature or the governor, certification was at once made to the Secretary of the Treasury for the payment of the amount of the first installment of the fund (\$15,000) to the State treasurers, to be made over, in the manner

prescribed in the act of Congress, to such institutions as were respectively designated to receive it.

January 19, 1891, a circular letter was sent by the Commissioner of Education to the presidents of the colleges which had received the first installment, in which attention was especially called to the limitations placed by the act upon the use of the money received, and accompanied by a blank form for making a provisional report of the receipt and expenditure of the first installment. This report called for a statement of the date of receipt of the first installment and the amount thereof received by the college, the amount expended up to date and for what purposes, and the specific purposes to which the balance was to be applied.

On September 20, 1891, a circular letter was sent to the college presidents, accompanied by a form for the statistics to be forwarded with the president's report, which form had been recommended by the Association of American Agricultural Colleges and Experiment Stations, in session in Washington during the summer of 1891. This statistical report shows the receipts and expenditures of the college for and during the year; for the college and the experiment station; the condition of the college library; and the classified record of students and instructors and of officers of the station. At the same time blank forms were furnished for the financial statement of the college treasurer, showing receipt and detailed expenditure of the fund received under the act of 1890.

On June 30, 1892, still another circular letter from the Commissioner of Education called attention to several important clauses of the act of 1890 and laid especial stress upon that section which relates to the uses to which the fund could be applied. The statistical reports for this year include, besides the matter of information furnished in 1891, statistics of farm lands, buildings, and general equipment of the college. The following is an extract from the Commissioner's letter of June 30, 1892:

The fact that it has already been necessary to require several institutions to replace sums of money erroneously expended from this fund, makes it advisable to call attention again to the limitations placed by the act of Congress of August 30, 1890, upon the use of the money appropriated by it, which is "*to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction.*" It is held that this language authorizes the purchase from this money of apparatus, machinery, text-books, reference books, stock, and material used in instruction or for purposes of illustration *in connection with any of the branches enumerated*, and the payment of salaries of instructors *in said branches only*. The erection of buildings is specifically prohibited by the act, and the Assistant Attorney-General has decided that the purchase of land is not allowable. It should not be expended for repairs, furniture, cases, shelving, or the like, or (as in one instance) for musical instruments, the salary of a music teacher, an outfit of tableware and cooking utensils, etc. In short, *the plant*—the land, buildings, and ordinary appliances of a school—must be provided from other sources, and this particular fund must be applied exclusively to the sub-

jects named in the act and the facilities especially required for those subjects. In closing his report the treasurer should certify that his statement is correct and true and that no part of said fund has been applied to any subject not contemplated in the act of Congress.

The reports of the presidents and treasurers, prepared in the manner suggested by the Commissioner, are subjected to careful scrutiny at the Bureau. Three copies of each report are required, one being retained by the Bureau for its own use, the others being sent to the Secretaries of the Interior and of Agriculture. Certification to the Secretary of the Treasury for payment is made when all reports are found to be correctly stated and show no illegal or improper use of the funds.

This detailed account of the manner in which the law is administered will show that no effort is neglected on the part of the Executive Department to fully and equitably carry out the provisions of the act.

Receipts and Disbursements Under the Act of August 30, 1890, to June 30, 1892.

	Name.	Treasurer.	Fiscal year ended June 30, 1891.			Fiscal year ended June 30, 1892.		
			Receipts.	Expenditures.	Balance.	Receipts.	Expenditures.	Balance.
1	Alabama Polytechnic Institute.....	E. T. Glenn.....				\$27,103.76	\$21,256.45	\$5,847.31
2	Alabama State Colored Normal School.....	S. L. Ross.....				12,812.63	10,432.99	2,379.64
3	University of Arizona.....	S. M. Franklin.....	\$31,000.00		\$22,999.87	17,000.00	36,251.41	3,748.46
4	Arkansas Industrial University.....	J. L. Cravens.....	10,999.09	\$8,000.13	10,999.09	24,000.00	19,335.89	15,573.20
5	Arkansas Branch Normal College, Col.....	J. L. Cravens.....	4,690.91		4,690.91	9,000.00	6,447.07	6,643.84
6	University of California.....	W. C. Route.....		2,437.20	12,564.80	33,001.00	32,359.83	13,204.97
7	Colorado Agricultural College.....	F. C. Avery.....	31,000.00	17,295.68	13,704.32	30,661.15	30,661.15	43.17
8	Sheffield Scientific School of Connecticut.....	Timothy Dwight (acting).....	19,793.51	11,206.49	11,206.49	17,000.00	26,619.02	1,687.47
9	Dartmouth College.....	Geo. C. Evans.....	15,000.00	10,024.49	4,975.51	23,403.00	20,849.82	7,553.69
10	Delaware Colored Agricultural College.....	D. M. Bidgely.....	3,000.00		3,000.00	6,600.00	8,658.95	9,941.04
11	Florida Agricultural College.....	R. J. Fray.....	15,500.00	15,500.00		8,500.00	8,500.00	
12	Florida Colored Normal School.....	E. J. Fray.....	15,500.00			33,000.00	45,262.82	2,737.18
13	University of Georgia.....	A. L. Hall.....	15,000.00		15,000.00	33,000.00	34,112.52	4,564.11
14	University of Illinois.....	John W. Rann.....		9,323.37		17,000.00	17,000.00	
15	Purdue University of Indiana.....	J. M. Fowler.....	31,000.00	31,000.00		17,000.00	30,891.50	4,402.53
16	Iowa Agricultural College.....	Herman Inapp.....	31,000.00	12,795.97	18,204.03	17,000.00	24,739.76	472.60
17	Kansas Agricultural College.....	Joshua Wheeler.....	31,000.00	22,767.64	8,232.36	17,000.00	31,718.08	541.46
18	Kentucky Agricultural and Mechanical College.....	E. S. Bullock.....	12,825.00	8,780.46	4,044.54	28,515.00	4,350.34	202.00
19	Kentucky Colored Normal College.....	John W. Payne.....	2,175.00	566.66	1,608.34	2,320.00	19,656.36	4,076.30
20	Louisiana State University.....	H. Skelfield.....				23,732.06	14,943.80	9,323.54
21	Louisiana Southern University, colored.....	F. L. Richardson.....	31,000.00	11,801.58	19,198.42	17,000.00	30,556.36	5,642.06
22	Maine State Agricultural and Mechanical College.....	Joseph R. Owens.....	31,000.00	16,076.53	14,923.47	17,000.00	26,466.70	5,456.77
23	Maryland Agricultural College.....	George F. Mills.....				16,000.00	5,000.00	11,000.00
24	Massachusetts Agricultural College.....	George Wigglesworth.....				17,000.00	17,000.00	
25	Massachusetts Institute of Technology.....	Henry G. Reynolds.....	31,000.00	31,000.00		17,000.00	13,747.20	.08
26	Michigan Agricultural College.....	O. C. Merriman.....	31,000.00	28,790.92	2,209.08	17,000.00	19,209.00	
27	University of Minnesota.....	R. C. King.....	15,000.00	9,374.17	6,125.83	7,621.37	13,747.20	
28	Mississippi Agricultural and Mechanical College.....	T. F. Daniels.....	15,494.37	3,446.54	12,047.83	9,378.63	12,773.15	8,653.31
29	Alcorn Colored Agricultural and Mechanical College of Mississippi.....					31,162.11	30,842.72	14,481.19
30	University of Missouri.....	R. B. Price.....	14,160.80		14,160.80	1,836.89	3,839.20	856.64
31	Lincoln Colored Institute of Missouri.....	A. Brandenburger.....	839.20		839.20	23,000.00	37,713.20	6,878.81
32	University of Nebraska.....	J. S. Deles.....	15,000.00	3,407.99	11,592.01	17,000.00	17,000.00	
33	Nevada State University.....	C. C. Bender.....	31,000.00	31,000.00		17,000.00	17,000.00	
34	Agricultural and Mechanical College of New Hampshire.....	Frederick Smyth.....	31,000.00	17,545.25	13,454.75	17,000.00	17,092.26	13,362.63
35	Rutgers' Scientific School of New Jersey.....	Fred Erdinghuyzen.....	31,000.00	15,949.09	15,050.91	17,000.00	30,280.37	1,770.54
36	New Mexico Agricultural College.....	W. L. Rymnar.....	31,000.00	7,165.62	23,834.38	17,000.00	17,929.72	22,904.66
37	Agricultural College of Cornell University, New York.....	E. L. Williams.....	15,000.00	8,533.63	6,466.37	33,000.00	37,993.77	1,472.60
38	North Carolina Agricultural College.....		15,000.00	15,000.00		33,000.00	33,000.00	
39	Shaw University of North Carolina, colored.....							
40	North Dakota Agricultural College.....	S. L. Lyon.....	16,000.00	13,218.47	2,781.53	32,000.00	27,661.17	7,090.36

41	Ohio State University.....	F. W. Prentiss.....	31,000.00	10,055.36	20,944.64	17,000.00	37,366.36	578.34
42	Oklahoma Agricultural and Mechanical College.....	A. A. Ewing.....	31,000.00	31,000.00	.....	17,000.00	17,000.00	.....
43	Oregon State Agricultural College.....	A. R. Shipley.....	31,000.00	17,680.21	13,310.79	17,000.00	17,000.00	2,626.19
44	Pennsylvania State College.....	John Hamilton.....	31,000.00	12,911.60	18,088.40	17,000.00	27,684.60	5,398.15
45	South Dakota Agricultural College.....	S. W. Lockwood.....	31,000.00	26,021.41	4,978.59	17,000.00	29,630.25	40.90
46	University of Tennessee.....	James Comfort.....	22,000.00	1,927.75	20,072.27	12,750.00	27,019.49	5,356.56
47	Texas Agricultural and Mechanical College.....	L. S. Ross.....	9,000.00	895.49	8,134.51	4,250.00	27,465.71	4,870.88
48	Frederic View Colored Normal School, Texas.....	John T. Calne, Jr.....	31,000.00	17,136.66	13,863.34	17,000.00	7,513.63	16,488.86
49	Utah Agricultural College.....	E. H. Powell.....	31,000.00	16,485.24	14,514.76	17,000.00	18,804.00	1,601.53
50	University of Vermont.....	John Gardner.....	20,666.66	19,466.16	1,200.50	11,335.33	30,913.23	1,290.50
51	Virginia Agricultural and Mechanical College.....	F. N. Gilman.....	10,333.33	10,280.88	52.45	5,666.67	11,333.33	205.41
52	Washington State Agricultural College.....	John L. Harvey.....	12,000.00	.....	12,000.00	17,000.00	5,513.71	11,348.98
53	University of West Virginia.....	Chas. H. Turner.....	3,000.00	.....	3,000.00	27,000.00	4,440.91	6,884.97
54	West Virginia Colored Institute.....	E. F. Riley.....	.....	.....	.....	6,000.00	2,115.06	.....
55	University of Wisconsin.....	Edward Iverson.....	31,000.00	12,900.86	18,099.14	17,000.00	17,000.00	50,777.05
57	University of Wyoming ³.....	.....	.....	.....	.....	17,000.00	.....	4,322.09

¹ University of Georgia for both colleges for white and colored students.

² Maryland Agricultural College for his "Eastern Branch," for colored students, located at Salisbury.

³ Idaho and Montana had not established and opened their colleges till after the close of the fiscal year 1892.

As has already been stated, the receipt of the aid provided for by the Congressional acts above cited is made dependent upon the partial maintenance of agricultural and mechanical colleges by the States themselves. It would be extremely difficult, if not really impossible, to estimate the total amount of the State aid given to all of these colleges. The following table will, however, show the amount appropriated in each case for the fiscal year ended June 30, 1892, including the income from State endowments, the annual appropriation, and the special State appropriations for buildings and all other purposes:

State aid to colleges of agriculture and the mechanic arts for the year ended June 30, 1892.

State.	Name of institution.	Amount of State aid.
Alabama	Alabama Polytechnic Institute	\$17,055
	State Normal and Industrial School (colored)	4,000
Arizona	University of Arizona Agricultural College	25,179
Arkansas	Industrial University	
	Branch Normal College (colored)	
California	University of California Agricultural College	
Colorado	State Agricultural College	
Connecticut	Sheffield Scientific School of Yale University	
Delaware	Delaware College	25,000
	Agricultural College (colored)	8,000
Florida	State Agricultural College	
	State Normal School (colored)	
Georgia	State Agricultural and Mechanical College of University of Georgia	
	Industrial College of University of Georgia (colored)	7,375
Idaho	University of Idaho	
Illinois	University of Illinois Agricultural College	
Indiana	Purdue University Agricultural and Mechanical College	42,500
Iowa	Iowa Agricultural College	
Kansas	State Agricultural College	
Kentucky	Agricultural and Mechanical College	32,310
	State Normal College (colored)	3,000
Louisiana	State University	
	Southern University	10,000
Maine	State College of Agriculture and Mechanic Arts	24,500
Maryland	Maryland Agricultural College	6,000
Massachusetts	Agricultural College	27,137
	Institute of Technology	4,000
Michigan	State Agricultural College	29,442
Minnesota	College of Agriculture of University of Minnesota	147,500
Mississippi	Agricultural and Mechanical College	25,821
	Alcorn Agricultural and Mechanical College (colored)	13,571
Missouri	College of Agriculture and Mechanic Arts of University of Missouri	
	Lincoln Institute (colored)	23,035
Nebraska	University of Nebraska Industrial College	
Nevada	State University Agricultural College	20,000
New Hampshire	College of Agriculture and Mechanic Arts	
New Jersey	Rutgers Scientific School	1,500
New Mexico	Agricultural College	6,600
New York	Agricultural College of Cornell University	
North Carolina	Agricultural College	
	Shaw University (colored)	
North Dakota	Agricultural College	25,000
Ohio	State University Agricultural College	60,202
Oklahoma	Agricultural and Mechanical College	
Oregon	State Agricultural College	
Pennsylvania	State College	
South Dakota	Agricultural College	
Tennessee	University of Tennessee Agricultural College	
Texas	Agricultural and Mechanical College	65,500
	Prairie View State Normal School (colored)	
Utah	Agricultural College	108,000
Vermont	Agricultural College of University of Vermont	
Virginia	Agricultural and Mechanical College	6,250
	Hampton Normal Institute (colored)	
Washington	State Agricultural College and School of Science	
West Virginia	University of West Virginia	40,276
	West Virginia Institute (colored)	11,796
Wisconsin	University of Wisconsin Agricultural College	
Wyoming	University of Wyoming Agricultural College	4,435

In the act of 1862 entitled "An act donating public lands to the several States and Territories which may provide a college for the benefit of agriculture and the mechanic arts," it will be noticed that the terms are express and clear in setting forth the duties of the States in accepting its provision. The fund to be acquired was to be applied "to the endowment, support and maintenance" of colleges of the character therein specified, but "no portion of said fund, nor the interest thereon, shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings" (sec. 5, second clause). Again, all the expenses connected with the management of such land and of the moneys received therefrom were to be paid by the several States, in order that the entire proceeds of the sale of the land or scrip might be applied to the purposes set forth in the act, and any loss of capital or interest which might be sustained was to be refunded out of the State treasury. The only exception allowed to these stipulations was that provided for in section 5, where it is declared that a sum not to exceed one-tenth of the amount received might be expended in the purchase of lands for sites or experimental farms upon the authority of the State legislature.

By thus limiting the manner of expenditure of the fund to the purposes designed by the spirit of the act, two very important and highly desirable objects were attained. First, the colleges thus endowed were made distinctively *State* institutions. The funds were to be applied to colleges already established, or to such as should subsequently be established by the States themselves. Thus local public interest was at once enlisted in behalf of these institutions, and State pride aroused in their successful workings. It is a fact which may properly be emphasized that both the act of 1862 and the act of 1890 are distinctly acts *in aid* of colleges of agriculture and the mechanic arts. Secondly, the benefits of an undiminished endowment fund were thus forever secured to these colleges, and their financial independence made almost certain.

The provisions of the third clause of section 5, limiting the time within which any State might claim the benefit of the act, and the seventh clause of the same section, requiring legislative assent within two years from the date of its approval, were amended in 1866. The sixth clause of section 5 is now no longer operative.

From 1863, in which year the grants of land could first be located, to 1880, a total of 9,600,000 acres were taken up, 11 States receiving land, and 27 land scrip. As specially provided, no State was allowed, as a State, to locate land within the borders of another State, although such location might be made by its assignees, not, however, to exceed the amount of one million acres.

In the years immediately following the passage of the act, owing to the disturbed condition of the country, consequent upon the outbreak of the civil war, the business and financial panic, and in the Western States the continual Indian troubles, those States which at once dis-

posed of their lands often did so at a most ridiculously low figure, with a few notable exceptions. Land was a drug upon the market, and in some instances was sold at but a few cents per acre—a serious blow to the benefits of the grant.

Annual income from land-grant act of July 2, 1862.

State.	School.	Amount of income.	State.	School.	Amount of income.
Alabama	White ..	\$20, 280	Missouri	Colored ..	.....
Arizona	Colored ..	.....	Nebraska .....	.....	.....
Arkansas .....	.....	.....	Nevada .....	.....	.....
California .....	.....	.....	New Hampshire .....	.....	\$1, 800
Colorado .....	.....	2, 500	New Jersey .....	.....	6, 960
Connecticut .....	.....	6, 632	New Mexico .....	.....	.....
Delaware .....	.....	4, 980	New York .....	.....	18, 000
Florida	White ..	.....	North Carolina	White ..	.....
Georgia	Colored ..	9, 101	.....	Colored ..	.....
.....	White ..	.....	North Dakota .....	.....	.....
.....	Colored ..	.....	Ohio .....	.....	32, 692
.....	White ..	16, 934	Oklahoma .....	.....	.....
.....	Colored ..	.....	Oregon .....	.....	.....
Idaho .....	.....	.....	Pennsylvania .....	.....	30, 000
Illinois .....	.....	.....	Rhode Island .....	.....	.....
Indiana .....	.....	17, 000	South Carolina	White ..	.....
Iowa .....	.....	49, 371	.....	Colored ..	.....
Kansas .....	.....	28, 765	South Dakota .....	.....	.....
Kentucky	White ..	9, 900	Tennessee .....	.....	23, 760
.....	Colored ..	.....	Texas	White ..	14, 280
.....	White ..	.....	.....	Colored ..	.....
Louisiana	Colored ..	.....	Utah .....	.....	.....
.....	.....	.....	Vermont .....	.....	8, 130
Maine .....	.....	6, 455	Virginia	White ..	30, 669
Maryland .....	.....	6, 142	.....	Colored ..	10, 529
Massachusetts	Ag'l	6, 400	Washington .....	.....	.....
.....	Mechan ..	5, 268	West Virginia	White ..	5, 400
Michigan .....	.....	26, 154	.....	Colored ..	.....
Minnesota .....	.....	20, 500	Wisconsin .....	.....	17, 113
Mississippi	White ..	4, 929	Wyoming .....	.....	.....
.....	Colored ..	5, 679	.....	.....	.....
Missouri	White ..	.....	.....	.....	.....

The payments or yearly installments of the fund provided by the act of Congress of 1890 have already been received; although owing to irregularity of legislative acceptance in the States, and in some instances to the very recent establishment of the institutions designated as beneficiaries, all the States have not enjoyed the benefits of the appropriations for the same length of time. The first and second installments—\$15,000 and \$16,000—were available for the year ended June 30, 1891; the third installment—\$17,000—for the year ended June 30, 1892.

Unlike the annual appropriation of \$15,000 for the use of the experiment stations, the amount of the fund remaining in the hands of the treasurer at the close of the fiscal year does not lapse into the U. S. Treasury. In June of 1891, and again in June of 1892, in many of the States a very considerable unexpended balance remained of the amount received during the fiscal year. The explanation of this fact is to be found in the absence of provision for certain of the departments provided for in the acts of Congress by the colleges themselves, most frequently for the mechanical department. When sufficient time has been given for the establishment of the necessary plants, the purchase of equipment will be generally completed.

In order to comprehend the essential points of difference in the provisions of the three several acts of Congress of 1862, 1887, and 1890, let us compare the clauses defining the purposes of each.

In the original land-grant act of 1862 the proceeds of the sales of land or scrip are to be invested and the interest thereon "appropriated, by each State which may take and claim the benefit of this act, for the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific or classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

The experiment-station act of 1887, in its first section, provides:

"That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges, or agricultural department of colleges, in each State and Territory established, or which may hereafter be established, in accordance with the provisions of an act approved July second, eighteen hundred and sixty-two, entitled, etc., * * * or any of the supplements to said act, a department to be known and designated as an "Agricultural Experiment Station," *Provided*, etc.

The purpose of the act of 1890 can be gathered from the following extracts from section 1:

That there shall be, and hereby is, annually appropriated * * * for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established, in accordance with an act of Congress, approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars, * * * and the annual amount to be paid * * * to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic sciences, with special reference to their applications in the industries of life, and to the facilities for such instruction.

It will thus be seen that while the act of 1862 provides for the endowment of colleges where the "leading object" shall be the advancement of agriculture and the mechanic arts, it does not prohibit the use of the endowment fund for other departments of instruction, even of those least allied to the industrial sciences; and yet it can not be questioned that, however broadly the act may be interpreted, the advancement of agriculture and the mechanic arts is really the primary purpose of its provisions. It seeks to promote liberal and practical education, it is to be noted, of the industrial classes. It is a well known principle that laws are most properly construed by considering whenever possible the evident intention of their framers along with the exact meaning conveyed by their words. When this rule is applied to the case in point the conclusion is unavoidable that the purpose of the Federal endowment is to furnish opportunities for the youth

of the land to acquire a thorough scientific knowledge of agriculture and a practical working training in the mechanic arts—that these are, first and last, the main objects. But since experience and history have shown that the highest degree of success and the greatest results of labor in any walk of life can only be attained by those possessed of a fair and liberal education, Congress has so provided that these schools shall not be strictly and solely of a technical nature, but, by not excluding the other scientific and classical studies from the course, has secured the advantages of a general education to the industrial classes.

Power is left to the legislatures of the several States to prescribe the manner in which the several branches of learning are to be taught. Thus the plan of organization of the colleges established in compliance with the provisions of the act of 1862 is clearly a matter resting with the States, and for which the States themselves are to be held responsible. As a result, the institutions which became the beneficiaries of the endowment are found to be of widely different characters, ranging all the way from the college or university, offering six or more distinct courses of study, to the school of a strictly agricultural and mechanical trend, where only so much of general literary training is offered as appears absolutely necessary for the work of the technical department.

The act of 1890 admits of no such broad construction; the departments therein provided for are such as specially relate to the particular objects of Federal aid. Again, the Experiment Station act, it will be noticed, provides for the “acquiring and diffusing” of agricultural knowledge. But this word “diffusing” is not to be taken to mean the offering of regular courses of collegiate instruction, but rather simply the making public, by any and all such means as may appear expedient, the results of the investigations and experiments conducted at the station.

The question is, of course, pertinent: Why, since the manifest intention of Congress in making the original grants of land to the States for agricultural and mechanical education was to establish technical schools, were not the terms of the act of 1862 more explicit in limiting the expenditure of the fund to be derived from the sale of the land to these particular subjects? To this the answer is a two-fold one: First, because, as has before been stated, it was really proposed to make the education of the industrial classes as liberal and as complete as possible; and, secondly, because such technical instruction was essentially a new thing, and one upon which the public would naturally be inclined to look with some degree of hesitation and doubt, it was deemed expedient to first present it in conjunction with the more generally understood and approved form of college curriculum.

It is stated that the “leading object” of these institutions shall be to teach such branches of learning as are related to agriculture and the mechanic arts; but even the most cursory examination of the colleges thus aided will show that in a large majority of cases these branches

have not been made the "leading objects," although of late years they have been more and more demanding greater recognition, as, at least, coördinate departments of the several institutions.

While thus differing in the ends proposed by their provisions and in the manner in which those ends are to be accomplished, it is manifestly improper to regard these acts as wholly distinct and disconnected. They are severally to be construed as the logical and successive steps of a carefully formulated plan of governmental aid to the cause of the agricultural and mechanical advancement of the industrial classes. Each is but a part of what can be seen to be a complete and fairly comprehensive whole. The acts of 1887 and 1890 were framed with reference to the act of 1862, and are supplemental thereto, as, indeed, they are stated to be. The act of 1862 provides for what was then comparatively an innovation in college work—scientific agricultural education and manual training in connection with instruction in the physical sciences. The Hatch Experiment Station act was designed to further such college work by providing means for the increase of agricultural knowledge and facilities for rendering the theoretical instruction of the lecture-room at once more logical and more efficient, by giving it a practical turn. Finally, the colleges being established and their departments of agriculture and its allied sciences and of applied mechanics being fairly organized and started in their work, the act of 1890 was intended to place these departments, at a single stroke, upon a plane of complete financial independence, to extend to them the opportunity of securing the most efficient instructors and the most modern and approved equipment for their work, and to make them preëminently what they were from the first intended to be, the "leading objects" in the institutions of which they are a part.

When sufficient time shall have elapsed to enable all of these schools to thoroughly organize and equip the laboratories, farms, and workshops with the funds derived from this last magnificent appropriation, we may expect to see much greater uniformity in their prescribed courses. As yet such uniformity is certainly lacking. Owing to differences in local conditions, and to variations in the standard of instruction which these institutions are respectively obliged to maintain, exact conformity to a single type may perhaps be impossible; but from a careful investigation of the terms of the acts of Congress it would seem that a general outline of the work to be accomplished by each and every one of the endowed colleges of agriculture and the mechanic arts may easily be drawn.

In a purely agricultural and mechanical college, then, it would appear that two distinct courses should be offered; the one agricultural, the other mechanical. The first year's work could properly be made the same for both; preparatory drill in language, mathematics, and the elements of science. For the agricultural course enough of Latin

should be taught to render the instruction in English of the greatest possible educational value, and to facilitate the comprehension of scientific terms. French and German will be found all essential for the more advanced study of agricultural science. As to the sciences themselves, those most nearly related to the soil and treating of its chemical and physical properties and changes, would seem to claim first attention: chemistry, studied principally with reference to its bearings upon agriculture, fertilizers and animal foods, geology, and mineralogy. Biological work—an illimitable field, and one in which it is most easy for students to be led beyond the borders of the practical—after the necessary preliminary instruction, should be confined strictly to the application of its many branches to farm life and farm economy; as, for example, economic entomology, structural and physiological botany, and so much of zoology and ornithology as relates directly to domestic animals, farm pests, etc. Comparative anatomy, bacteriology, and animal physiology are of value as far as they are related to veterinary science. The extent of the instruction given under the names of agriculture, horticulture, and stock raising, of course, must depend upon the amount of time allowed by the length of the course and upon the local agricultural conditions. In no case does it seem allowable to omit instruction in general farm management, business customs, and farm law, or bookkeeping and farm accounts. No agricultural course could be called complete in which no attention was given to those branches of learning which look to the production of a good citizen, as well as a good farmer. As a consequence, at least an outline course in general and constitutional history should be offered, together with the study of the duties of citizenship and the essentials of political economy. The mathematical work of such a course would naturally be of the nature expressed by the term “applied,” as would also be the instruction in physics and in mechanics.

An ideal mechanical course would seem—while including all the more liberal branches of the course thus roughly outlined above—to substitute for the work in agriculture, horticulture, and, to a great extent, in the natural sciences, laboratory practice in the physical department, higher mathematics, mechanical drawing, and manual labor in the mechanical shops. A four years’ course, embracing carpenter work, forge and furnace work, machine construction and design, and the principles of mechanical engineering, might clearly be made sufficiently thorough and complete to enable the graduate to at once take his place as a skilled mechanic, draftsman, or engineer.

Such being the possibilities with which the agricultural and mechanical colleges have been endowed, it is hoped in the following pages to convey an idea of how and to what extent they have performed the functions allotted to them.

AGRICULTURAL INSTRUCTION IN COLLEGES RECEIVING FEDERAL AND STATE AID.

Properly speaking, agricultural education is comparatively a modern idea. The very liberal endowments of the General Government have resulted in the establishment of schools offering instruction in scientific agriculture in every section of the United States, but it must be remembered that prior to 1835 they were features of the educational system wholly unknown in this country. In Europe by the close of the last century several such institutions had been successfully inaugurated, although their work was still but little understood and their possibilities wholly unrealized. While the earliest attempt to found an agricultural school may be said to be that of the Abbé Rosier, in France, in 1775, it was not until 1799, when Emanuel von Fellenberg established the school of Hofwyl upon his estate near Berne, that agricultural education may really be considered to have been begun. In the same year a similar institution was organized at Korenien, in Bohemia, which was followed, in 1803, by the founding of an industrial school at Prague, where instruction was not confined to agriculture, but embraced chemistry, physics, mathematics and drawing, and mechanics and technology.

From this time the number of schools where agriculture was made the first or at least an important department of instruction increased steadily, if not with great rapidity. France, Prussia, Austria, Bavaria, Saxony, and Belgium soon saw the advantage to be gained by thus securing the special training of the farming classes, and institutions differing in grade and in the principles adopted as to methods of work were instituted in the most favorable farming regions. In some of the European states chairs of agriculture were established in the universities, although this was not until after some advancement had been made in the study of the natural sciences.

England responded somewhat slowly to the movement for agricultural education, and as late as the middle of the present century there were but five such schools in the country, while in Ireland over sixty had been established, mostly, however, of an inferior grade. Considerable interest was taken in the subject by Russia, where, by 1850, about sixty-five schools offered agricultural instruction.

In 1851 Prof. Hitchcock estimated that the number of agricultural schools, including departments of universities, etc., in Europe, was:

In France	75	In Scotland	2
In England.....	5	In Russia.....	68
In Italy	2	In Saxony.....	5
In Prussia.....	32	In Württemberg	7
In Austria.....	33	In other German States.....	16
In Belgium.....	9		
In Bavaria	35	Total	352
In Ireland.....	63		

Since 1840 the systems of agricultural education adopted by the European nations have been an essential part of their economic organization. Many excellent accounts of their methods and their work have been published.

The first agricultural school established in the United States was probably that begun in Seneca County, N. Y., near the town of Ovid, in 1856. This institution was founded in part by the State of New York, in part by private subscription, and was modeled upon the plan of the European schools then in existence.

In 1857 the Michigan State Agricultural College was formally opened. This college owes its existence to the State government, which, in 1855, made provision for its founding in compliance with the constitution of the State, adopted in 1850. In 1857 the proceeds of the sales of certain granted salt-lands and an appropriation of \$40,000 were given by the legislature, a tract of nearly seven hundred acres for a farm purchased, and a suitable building erected. The Agricultural College of Michigan is thus the oldest of the "State agricultural colleges."

Following the establishment of the Michigan College, several similar institutions were put in operation in the Eastern States and in the more thickly settled farming regions of the Ohio and Mississippi valleys. Among those were the Agricultural College of Ohio, at Cleveland, and the Farmers' College, near Cincinnati. In Pennsylvania in 1855 the State Agricultural Society organized the Farmers' High School, afterwards the Pennsylvania Agricultural College and now the Pennsylvania State College. The Maryland Agricultural College, organized by private subscription, is, next to the Michigan Agricultural College, the oldest of the State colleges.

But while for several years, until the first Federal endowment act became a law, the States themselves made little effort to encourage the study of scientific agriculture, we find that agricultural instruction was made a part of the regular course in not a few of the higher educational institutions. Chairs of agriculture were maintained at Yale College and in colleges in more than one of the Southern States. So, too, as early as 1845 agriculture was taught theoretically in private schools, as, for instance, the Cream Hill Agricultural School, at West Cornwall, Conn.

The great impetus given to the movement for the advancement in agricultural knowledge by the passage of the first Morrill act of 1862 was, perhaps, most strongly felt in the Western and Southwestern States where the still comparatively new population eagerly grasped at the opportunity thus afforded to secure more light upon the questions relating to the cultivation of the land and the most economical conduct of their agricultural interests. The manner in which the States and Territories accepted the provisions of the grant and the history and character of the colleges which were everywhere established in compliance therewith are given in a subsequent part of this report.

Let us now examine the courses of instruction offered by these colleges, and especially those which are particularly designated by the name of agricultural course.

The "sciences allied to agriculture" are, of course, both natural and physical; in fact, it would be somewhat difficult to exactly define the extension of this expression, since few of the departments of modern science have not, or may not have, practical application upon the farm. A narrower meaning must, however, be given it in speaking of the work of institutions of learning which seek to prepare the student for the active duties of the agriculturist. Here the "sciences allied to agriculture" may properly be understood to be horticulture, botany, chemistry, general biology—but more especially zoölogy and entomology, geology, mineralogy, meteorology, veterinary science, physics, and applied mechanics. In addition to these purely technical branches, it is very generally conceded that each student in the agricultural college should receive enough of instruction in the more liberal studies to make his education complete and fairly rounded; that the modern languages are truly requisite for advanced scientific work and for keeping up with agricultural investigations and agricultural literature, which each year is increasing in volume and in value; that the study of engineering, as far, at least, as it is applicable to farm improvements and farm surveying, is an essential feature of a properly balanced agricultural course; and, finally, that it is the duty of all such colleges to offer to their students instruction in civil government, the duties of citizenship, business methods, commercial customs, and political economy.

The department of agriculture, in most colleges kept distinct and separate, usually combines practice, to some extent, with theory. For this reason it is that some misunderstanding of its purpose exists on the part of the public. It is frequently stated that farmers do not care to send their sons to college to learn how to plow and hoe and perform the other manual operations of the farm; that such instruction may be more satisfactorily obtained at home. On the other hand, it is urged that "book farming" is not practicable under conditions confronting the student immediately upon leaving college, and that it is therefore not practical. Between these two extremes of public sentiment it has been the task of the agricultural colleges to steer, and upon the whole it would seem that they have done so successfully.

Manual labor in the field is not generally, although quite frequently, required. Where it is made compulsory, it usually consists of the regular farm work taken up according to weather and season. But the practice of inducing students to take practical outdoor work by offering them a reasonable compensation for their services has been found to be so successful that few of the colleges now neglect manual farm labor. In purely agricultural colleges such field work would certainly seem to be a most essential part of the course. As a rule, the

greatest objection to it, after all, comes from those who desire to take advantage of the scientific or other departments of the agricultural college without being obliged to give much attention to the work of the agricultural department. But it must be remembered that these colleges, properly speaking, were not designed for the benefit of such students.

The course of study in this department frequently begins with the history of agriculture, followed by lectures on the selection and location of farm lands, and general farm equipment. The study of soils, their chemical and physical properties, their relations to air and water and to vegetation, is next taken up, with descriptions and, if possible, illustrations of the various methods of drainage and irrigation. Soil-improvement—covering the whole field of fertilizers, natural and artificial; the composition and the use of commercial fertilizers; the preparation and care of barnyard manure, green manuring, fallowing, and the rotation of crops with reference to the retention and restoration of the chemical properties of the soil—are properly introduced at this point. Before entering upon the special study of crops, some knowledge of the construction and use of the common implements and machines employed upon the farm is considered necessary, and here the mechanical feature of the college proves especially valuable.

The line of work undertaken in the study of crop-culture, of course, varies in different States, attention being particularly given to the staple crops. After discussing the subjects of tillage and soil-dressing, some such works as Johnson's *How Crops Grow*, and *How Crops Feed* are made the basis of instruction. Then, if opportunity be given for manual labor, students are taught practically the management of the growing crops, their gathering and preparation for use or for the markets.

Along with this strictly agricultural course, the study of stock-raising is pursued. Beginning with the use of a text-book upon the different breeds of domestic animals, their characteristics, habits, and respective adaptability to climate, etc., stock-breeding and stock-feeding are successively treated. In this work the investigations of the experiment stations, where experiments with the different breeds of cattle, horses, sheep, hogs, etc., are continually being conducted, can be very advantageously made use of. In colleges maintaining a chair of veterinary science, lectures and recitations are given in this connection on pathology and therapeutics.

Frequently the departments of horticulture and of botany are separate, but in the majority of cases they are united, the one preparing for advanced work in the other. Horticulture, as the term is commonly understood when applied to college instruction, embraces market gardening, landscape gardening, fruit culture, floriculture, and often even forestry. Structural botany is made the basis for the study of plant diseases, excellent facilities for which are afforded by the well equipped

laboratories and the greenhouses now connected with nearly all the horticultural departments.

The application of the science of economic entomology to the prevention of damage to vegetation and live stock by injurious insects, the composition and application of insecticides, etc., is a branch of biological science which of late years has taken a deservedly prominent place in the agricultural courses everywhere.

Of all the branches related to agriculture none is of more real importance than that in which all modern agricultural science has its origin, namely, chemistry. Agricultural chemistry, for which a preparation in general chemistry is necessary, embraces, in the courses of the agricultural colleges, the origin and formation of soils, their analysis, and their adaptation to crop culture; the analysis of manures and fertilizers; the composition of foods; the analysis of fodder plants; the chemistry of stock feeding, and the analysis and testing of dairy products.

Dairying and other special branches of agricultural industry are frequently taken up in detail in the fourth or senior year of the regular college course in agriculture, while the course is generally completed by lectures on rural economy and farm law. In States where some one crop or line of agricultural work is especially important to the business interests of the people, courses, or schools of instruction, for advanced study in that subject have been established, as, for instance, the sugar school, connected with the University of Nebraska; the dairy school, connected with the University of Wisconsin; and the course in grape culture and wine-making, offered by the agricultural college of the University of California.

As an illustration of a course of study prescribed in a purely agricultural college, and one which is framed to comply in every particular with the intentions of the Federal endowment acts, the following schedule of work in the Massachusetts Agricultural College is selected. The figures denote the number of hours per week devoted to the different branches.

FIRST YEAR.

Terms.	Agriculture.	Botany and horticulture.	Chemistry.	Zoölogy and veterinary science.
Fall	Climatology 2	Botany—structural. 5	Chemistry—principles and metalloids. 5	.....
Winter	Farm accounts, history of agriculture. 2	.....	Metals..... 4	.....
Spring.....	Live stock, tools .. 5	Botany—analytical. 5	Mineralogy 4	.....

SECOND YEAR.

Fall	Soils—tillage and drainage. 5	Botany—ecological. 5	Geology 4	.....
Winter	Mixed farming, rotation of crops. 2	Laboratory work. 4	.....	Anatomy and physiology. 5
Spring.....	Manures, grains, and forage crops. 5	Horticulture..... 8	.....	.....

THIRD YEAR.

Fall	Farm implements, harvesting and storing crops. 2	Market gardening. 6	.....	Zoölogy—laboratory work. 8
Winter	Preparation and transportation of crops, markets. 2	.....	Laboratory work. 10	Zoölogy..... 3
Spring.....	Special crops, farm roads. 1	Forestry and landscape gardening. 6	Laboratory work. 5	Entomology..... 7

FOURTH YEAR.

Fall	Breeding and care of live stock. 4	} Lectures, law, etc. {	Laboratory work, chemistry of fertilizers. 8	Comparative anatomy of domestic animals. 3
Winter	Dairy farming..... 3		Organic..... 3	Veterinary science 5
Spring.....	Agricultural review, discussions. 3		Chemical industries. 3	Veterinary science 5

setts Agricultural College.

FIRST YEAR.

Mathematics.	Languages.	Drawing and composition.	Military exercises.
Algebra 5	Latin 3	Composition 1	..... 3
Algebra and geometry 5	Latin 4	Free-hand drawing .. 6	Tactics, half term... 1
Geometry 3	Latin 5	Composition 1	..... 3

SECOND YEAR.

Trigonometry 4	French 5	Composition 1	Tactics, half term .. 1
Mensuration 3	French 5	Mechanical drawing. 5	..... 3
Surveying 7	French 5	Composition 1	..... 3

THIRD YEAR.

Mechanics—draft, 3 friction, etc.	Rhetoric and composition. 3	.....	..... 3
Physics—sound and 4 heat.	English literature ... 5	Composition 1	..... 3
Physics—light and 3 electricity.	English literature ... 4	Composition 1	..... 3

FOURTH YEAR.

.....	Mental science 4	Composition and debate. 1	Military science. 1 to 3
Meteorology 2	Political economy 5	Composition and debate. 1	Military science. 1 to 3
.....	Constitutional history 5	Composition 1	Military science. 1 to 3

No other college may be said to offer a more successfully adjusted course than this, although in several instances particular departments have been more completely developed. It will be noticed that mathematics are not carried as far in this course as in perhaps the majority of agricultural colleges, and yet for all practical purposes the instruction in that department would seem to be sufficient. Again, what might be called a weak spot in the course is the entire omission of German, a language really almost necessary for original agricultural research.

While the Massachusetts Agricultural College in many respects might serve as a model institution of its kind, it is to be remembered that its opportunities have been exceptional. By the division of the Federal endowment funds between this college and the Institute of Technology at Boston, the whole of the portion received could be used for the specific purposes of its organization. No funds are required to be expended for, and, what is more important, no time need be given to any other line of work than that of agriculture and its kindred sciences. The course above given is the only course offered by the college.

Somewhat in contrast to the last are the following:

Maine State College of Agriculture.—Outline of course of two years in agriculture

FIRST YEAR.

First term.

Structural and physiological botany.
General chemistry.
Farm accounts and rural and business law.
Plane geometry or agricultural physics.

Second term.

Plant analysis and horticulture.
Agricultural chemistry.
Drainage and road construction.
Plane trigonometry and surveying, or entomology.

SECOND YEAR.

First term.

Horticulture.
Agricultural chemistry.
Animal anatomy and physiology.
Political economy.

Second term.

Stock feeding and dairying.
Stock breeding and veterinary science.
Civil government.
Geology and meteorology.

Outline of course of one year in agriculture.

First term.

Botany and horticulture.
General and agricultural chemistry.
Animal anatomy and physiology.
Farm accounts and rural and business law.

Second term.

Plant analysis and horticulture.
Agricultural chemistry.
Stock feeding and dairying.
Stock breeding and veterinary science.

These courses are typical "short courses" in agriculture. The needs of the farmer, from an educational point of view, can best be met by offering to him as nearly as possible just such an opportunity as he himself thinks it to his advantage to accept. The long period of four years, requiring attendance during many of the busiest seasons on the farm, at the time, too, when the young man's value as a farm hand is just beginning to be appreciated, deters many from entering the agri-

cultural colleges; just *how* many it is difficult to say. As a means to secure to such young men the benefits of an institution endowed especially for the education of the farming classes, short courses in agriculture, and in some cases in horticulture and in veterinary science, have been devised. The manner of conducting these courses is not the same everywhere, but it is a mistake to say that the effort is to crowd a four years' course into two years or one year. They are as carefully arranged and as judiciously adjusted as the longer agricultural courses. The two courses above given are fair examples of a two years' and a one year's course.

The following course is that offered by the Michigan Agricultural College, as the result of a gradual growth since the organization of the college:

Agricultural course, Michigan Agricultural College.

Terms.	First year.	Second year.	Third year.	Fourth year.
	<i>Hours.</i>	<i>Hours.</i>	<i>Hours.</i>	<i>Hours.</i>
Fall	Algebra .. 2	Agriculture—lectures .. 5	Anatomy .. 2	Botany or forestry ... 10
	Ancient history .. 5	Algebra .. 2	Laboratory practice. 1	Chemical physics. ... 10
	English .. 5	Botany—lectures .. 5	Organic chemistry .. 5	Veterinary science .. 5
	Geometry .. 3	Geometry .. 3	Physics .. 5	Zoölogy .. 5
	Rhetoricals .. 2	Surveying .. 2	Moral philosophy .. 5	Laboratory practice .. 3
		Trigonometry .. 3	Blowpipe analysis .. 5	Two essays, speeches.
		Essays.	Shakespeare .. 1	
Winter ..	Agriculture .. 5	Botany .. 9	Essays and speeches.	Civil engineering. ... 5
	Algebra .. 3	American literature .. 3	Analytical chemistry .. 10	United States Constitution .. 5
	Drawing .. 10	Rhetoric .. 5	Horticulture .. 5	United States history .. 5
	Geometry .. 2	Rhetoricals .. 2	Physiology .. 5	Geology .. 5
	Rhetoricals .. 2	Military tactics .. 5	Laboratory .. 15	Horticulture .. 5
			Shakespeare .. 1	Meteorology .. 5
			Military tactics .. 5	Veterinary science .. 5
			Essays and speeches.	English literature .. 4
Spring ...	Algebra .. 3	Systematic botany .. 2	Agriculture .. 5	Milton .. 1
	Botany .. 5	Chemistry .. 5	Agricultural chemistry .. 5	Political economy .. 5
	Geometry .. 2	Chemical manipulations .. 2	Entomology .. 5	Finance lectures .. 5
	Rhetoric .. 5	Landscape gardening .. 5	Laboratory practice. 2	Logic .. 5
		Physics .. 5	Shakespeare .. 1	Veterinary science .. 5
		Rhetoricals .. 2	Essays.	Quantitative analysis 10
				Speeches.

One of the greatest difficulties with which the movement in behalf of agricultural education in the United States has had to contend has been that of extending the benefits of the schools established and maintained by the Federal grants to the farmers themselves, and to the sons of farmers, who are unable from lack of time or any other cause to attend the college for the whole period covered by the course or often even for the time of a single session. Various plans have been proposed to meet this difficulty; short courses have been offered, as above described, and farmers' institutes and clubs have been organized in pursuance of the university extension plan. But a scheme has been adopted within the last two years in several of the Western States by which such students may receive much really practical instruction at the university or college by means of lecture courses extending over a single month. As an example, the following is the "short course for farmers" offered by the University of Nebraska:

Short course for farmers—(Four lectures daily).

[Delivered at the University of Nebraska in February, 1892.]

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Good government. 2. State education. 3. Practical education. 4. Anatomy and physiology of horses and cattle. 5. The vineyard and small fruit garden. 6. Wind-breaks and hedges. 7. Electricity applied to vegetable growth (2 lectures). 8. Soundness in animals. 9. Horses' feet. 10. Stable and farm hygiene. 11. Infectious diseases of stock. 12. Breeds of cattle. 13. Cattle foods. 14. Stock-breeding—heredity. 15. Stock-breeding—principles of progress. 16. Sheep and wool interests. 17. Plant structure. 18. Plant growth. | <ol style="list-style-type: none"> 19. Plant foods. 20. Flowers and reproduction. 21. Seeds and germination. 22. General propagation. 23. The apple orchard. 24. Climatology. 25. Sugar beets (3 lectures). 27. Sugar production. 28. Structure, development and transformation of insects. 29. Life histories and habits of insects: Remedies. 30. Insect enemies of garden and forest vegetation. 31. Insect enemies of grains and grasses. 32. Insect enemies of domestic animals. 33. A few geological hints. 34. The old-time racers. 35. A drop of the water we drink. 36. Inoculation, with practical instruction in all methods. |
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The last schedule—that of the Kansas Agricultural College—illustrates the manner in which the agricultural and mechanical work may be combined in a single course.

Course of study, Kansas State Agricultural College.

Terms.	First year.	Second year.	Third year.	Fourth year.
Fall.....	Algebra, English analysis, geometrical drawing, industrial.	Geometry, elementary chemistry, horticulture, industrial.	Trigonometry and surveying, agricultural chemistry, general history, industrial (farm and garden).	Agriculture or literature, physics and meteorology, psychology, industrial.
Winter ..	Algebra, English composition, book-keeping, free-hand drawing, industrial.	Geometry (completed), agriculture or household economy, organic chemistry and mineralogy, twelve lectures on military science, industrial (cooking).	Mechanics, constitutional history and civil government, rhetoric, industrial.	Logic, zoölogy, structural botany, veterinary science or floriculture, industrial.
Spring...	Algebra, English structure, botany, industrial (carpentry or sewing).	Anatomy and physiology, entomology, analytical chemistry, twelve lectures on military science, industrial (farm and garden or dairy).	Civil engineering or hygiene, physics, English literature, perspective drawing, drafting, industrial.	Geology, political economy, an elective in agriculture, horticulture, mechanics or related sciences, industrial.

INSTRUCTION IN THE MECHANIC ARTS IN AGRICULTURAL AND MECHANICAL COLLEGES.

The history of manual training has been too often written to need more than a brief notice here. It may properly be said to have superseded the old system of apprenticeship in the industrial arts. In Europe it is not wholly a modern idea, but in the United States it has

only reached anything like complete development within the present generation. The first regular manual training school established in this country was that at St. Louis, connected with the Washington University. Its founder was Dr. C. M. Woodward, under whose direction it is still continued, and is generally recognized as among the foremost schools of its kind in the United States. Unlike the movement for the advancement of agricultural education, the manual training idea was at once received into popular favor. Its practical utility was so thoroughly apparent, and the results of its work so immediately available, that a demand for departments of industrial training or mechanic arts arose in all parts of the country, and especially in the cities and manufacturing towns. This demand was in many places speedily met by the establishment of such departments by private and incorporated institutions of learning, by the founding of special manual training schools by the States and by individuals, and, in recent years, not a few of the States have introduced work of an industrial nature as part of the regular course of the public schools.

Thus in many of the colleges endowed by the act of 1862 the mechanic arts received attention from the first. In 1890, nearly all the State beneficiaries were found to have at least rudimentary mechanical departments. What each college has accomplished in this line since that time, with the aid of the last Federal endowment, will appear in the following sketches of their work.

An idea of the proportion observed in the expenditure of the fund for mechanical departments and for all other departments allowed by the act of Congress may be obtained from the following table, which shows the percentage of the total expenditure for the year ended June 30, 1892, which was applied to the department of mechanic arts:

State.	Amount.	Per cent.	State.	Amount.	Per cent.
Alabama	\$7,373	23	Mississippi	\$7,871	29
Arizona	12,891	36	Missouri	6,273	19
Arkansas	15,840	61	Nevada	5,740	33
California	11,802	36	New Hampshire	4,156	24
Colorado	3,238	11	New Mexico	5,603	31
Delaware	29,508	42	New York	25,292	66
Florida	3,369	13	North Dakota	6,753	28
Georgia	5,207	11	Ohio	7,772	20
Illinois	12,750	37	Pennsylvania	3,833	14
Indiana	5,221	31	South Dakota	3,515	11
Iowa	6,608	21	Tennessee	8,294	37
Kansas	7,865	32	Texas	13,533	38
Kentucky	20,918	58	Utah	1,456	7
Louisiana	3,085	9	Vermont	14,267	46
Maine	6,773	22	Virginia	5,372	32
Maryland	3,319	12	West Virginia	4,268	57
Massachusetts	800	3	Wisconsin	6,800	40
Michigan	3,300	19	Wyoming	4,049	13
Minnesota	7,326	38			

This table, it will be noticed, gives the expenditure and ratio by States, and not by colleges. In one sense such a comparison is somewhat misleading, as in some instances, where the most complete mechanical departments are maintained, the expenditure for that purpose

during the year was small. In general, where the ratio has been highest, it has been due to the purchase of equipment for a department that was but poorly supplied before, or where no such department had before existed.

There are now in almost every State manual training schools, other than those maintained as departments of the agricultural and mechanical colleges; but with few exceptions their facilities for instruction can hardly be compared with those possessed by the latter institutions. Where the shops for the mechanic arts have been for some years in operation it has been found necessary to replace a portion of their equipment every few years, so constant is the improvement in all kinds of mechanical apparatus. As a result the expense of keeping up such shops to the highest standard of usefulness is comparatively great.

The States, by appropriating funds for the erection of mechanical buildings, have done much to render the development of the departments of mechanic arts possible. Without such aid the benefits of the Federal grant would have been seriously limited in this line of work.

There are two wholly different plans of instruction to be found in different colleges in the United States where shop work is made a part of the course. The one known as the Russian system is based upon the idea that every piece of work undertaken by the student in the shops should have a distinct educational value; no time is expended in the production of articles for use or for the market. Every operation from the first to the last mechanical exercise is to be considered as a link in the chain of the complete mechanical course. The other method of instruction is to employ students in the making of articles of value, to teach them more by continual practice than by detailed instruction, often to employ them out of doors in performing carpenter's or smith's work, and, in general, to make them learn by doing. It is noticeable that the most successful schools are those where neither the one nor the other plan is strictly adhered to, but where constant practice in the use of tools is required, while at the same time no student is allowed to undertake work for which he has not been previously prepared. The great advantage which the so-called Russian system has over a course that is wholly or mainly utilitarian lies simply in the fact that it is a system, and a system which makes possible the development of manual mechanical training as a science. The difference in final results obtained is that the one method tends to produce a skilled laborer, the other a master mechanic; but it is well known that without a union of practice and system little can be done toward producing either.

A careful study of the organization of the mechanical departments of the agricultural and mechanical colleges discloses the fact that the more complete the equipment of these departments, the greater the facilities for instruction, and the higher the standard of work in the mathematical and physical sciences, the stronger is the tendency to get away from the purely industrial cast of the shop-work and to make

the manual labor required partake more of the nature of laboratory practice. One sometimes hears it said that it is only the lower grade institutions which attempt to prepare students for the practice of a trade; but this is manifestly an unjust stricture upon the work of certain colleges whose functions must necessarily be of a somewhat peculiar nature, as, for instance, the colored schools and the colleges recently established in the newer States. It must be remembered that, like everything else, a perfect mechanical course can only be maintained as the result of a gradual and long-continued growth. It would be clearly absurd to prescribe a highly technical course of mechanics when the previous training of the pupils was wholly inadequate.

Another rather surprising fact to be noticed in regard to these departments is the ease and rapidity with which they have generally been organized and equipped, and the readiness with which the regular college work has adjusted itself to the new conditions introduced thereby. It might reasonably have been expected that some difficulty would be experienced in their harmonious assimilation with the rest of the course. But such has not been the case. They seem, in fact, to meet exactly a long-felt want, to fall naturally, as it were, into symmetrical coöperation with all other departments. Instead of being, as was anticipated by some, mere abnormal excrecences upon the legitimate curricula—uncongenial attachments to be “carried,” because the law provided for them—they have become the source of very material advantage to the institutions, and where conscientiously and intelligently developed, there is almost no department that is not benefited by their work.

In looking at the provisions made by the colleges for the mechanical departments, we are at once struck by the very liberal policy on the whole adopted, as regards their apparatus and preparation for successful work. While some colleges, whose limited means oblige them to make a modest beginning, have been unable to furnish separate buildings for this purpose, most of them possess very conveniently arranged shops. These are usually three or four in number, a carpenter's shop, a forge room, a furnace room (or one room for both kinds of work), and a machine shop. Separate tools are provided for each student in all bench work, and often many of the most frequently used power machines, such as lathes and saws. In the forge room, or, as it is sometimes more properly called, the blacksmith's shop, each student or set of students is given the use of a fire, an anvil, and the necessary smith's tools. In the furnace room or foundry, benches, one or more large furnaces, and frequently a large cupola, are provided. The most elaborate equipment is that of the machine shop, which includes the steam plant and electric plant, milling machines, drills, etc. The yearly advancement in physical science makes this department the most difficult to maintain properly, as the first cost of the plant is not always the greatest.

The best idea of the equipments of such shops can be found by taking a single institution as illustrating their general nature. For this purpose the following statement, taken from the recent announcement of the engineering department of the University of Tennessee, is given. It must not be imagined, however, that all of the agricultural and mechanical colleges are as well supplied with mechanical apparatus as is this university. I select it because of its almost complete equipment. The facilities for foundry work, alone, are wanting. The shops are in a separate three-story building.

WOOD-WORKING SHOPS (2).

The first of these is a room about forty by thirty-five feet, furnished with benches having drawers and lockers for tools. Each of these has a Yale lock, with its special key. The lockers stand on the benches and contain a full set of tools for the exercises to be performed, each containing four planes, five chisels, back-saw, square, level, gauge, measuring rule, dividers, hammer, mallet, oilstone, oil can, and brad awl. A case in this room contains the additional tools for general use, such as rip and cross-cut saws, bits and bit stocks. A quick working and easily handled vise of iron is attached to the benches, one for each tool case.

The second room contains twelve speed lathes for wood turning, with a full set of tools for each lathe, kept in convenient reach on a tool rack. The tools are those required for turning and boring light work.

All the heavier power machines for wood working are placed in another room on the ground floor. They form a complete set for reducing lumber from its rough state to finished pieces of any kind, ready to be used for pattern making, cabinetwork or carpentry. They include a surface planer, jointer, shaper or friezer, combined rip and cross-cut circular saw, boring machine, jig saw, roll turner, and mortising machine. All these tools are new and of the best designs.

Drying kiln.

Connected with the wood shops is a model drying kiln. A system of steam pipes is so arranged as to give any desired temperature, this regulation being necessary to prevent chinking and splitting of boards by too rapid drying when green. The racks are so arranged as to permit of the removal of any piece of lumber desired without unpling.

BLACKSMITH SHOP.

This shop has six power blast forges, of the Buffalo Forge Company's manufacture. A full set of tools for light and medium work is provided for each forge, including hammers, sledges, tongs, chisels, bolt-headers, flatters, fullers of several forms and sizes, squares, calipers, and all other tools for work which can be handled by two men. The smoke is drawn away from the forges by a large exhaust fan. Suitable benches and blacksmiths' vises are also provided.

MACHINE SHOP.

The machine shop is fitted up with twelve benches and vises for use in chipping, filing, and the general work of fitting together the various parts of a machine. There is also an equipment of all the tools needed for the general work of the machinist. These tools are also of the best and newest designs of workmanship. They were selected with a view to showing all the general and more important special methods used in iron working. They include engine and speed lathes, planer, shaper, heavy and sensitive drill presses, universal milling machine, universal

reamer and milling cutter, grinder and emery tool grinder. They compose the tools for working iron, steel, and other metals, whether soft enough to be cut by other metals, or so hard as to necessitate being ground into form.

POWER.

Power is furnished by a Sweet straight-line engine and a boiler, the latter located in an annex. The engine runs all the machines during the day and at night is belted to the dynamos in the same room, for lighting the university buildings and grounds. The boiler, aside from supplying steam to the engines, heats the building and drying kilns by either direct connection to the heating coils, or with exhaust from the engine.

The room for mechanical drawing is in the third story of this building.

Since the courses offered in the mechanical departments vary greatly in the amount undertaken and the character of the work possible with the equipment possessed, no general outline that could be given would be applicable to all or to any great number of the colleges. But the following list of the more usual operations and principles with which students are familiarized will at least convey an idea of the general scope of such instructions.

In the wood-working shop.—Bench work, carpentry, pattern making, wood turning, cabinet making, joining, box making, frame construction, and, in some cases, the use of wood carvers' tools.

In the metal-working shop.—Bench work, forge and anvil work, molding and casting, brazing, soldering, sheet-metal work, welding, centering and drilling, the making and tempering of tools, and clipping, filing, and general vise work. Instruction is also given in the management of the fire and the ordinary work of the blacksmith shop.

In the machine-shop.—The study of the principles of mechanism and machine construction, the principles of steam, electric, and hydraulic machines; machine work with lathes, the use of drilling, planing, testing, and milling machines, machine design, and the construction of complete machines from parts made in the wood and metal working shops.

In all of these departments mechanical drawing is made a part of the entire course, and students are required to work from their own drawings.

When a full course in mechanical engineering is offered, the work of the shops is frequently of a more technical nature, and is in some degree supplemental to such a course. The study of the mechanics of machinery, of the strength of materials, of valve gear and link motion, of boilers, machinery of transmission, motors, electrical machinery, thermodynamics, building and building materials, bridge and road construction, sewerage, etc., is aided to no slight degree by a practical knowledge of tools and machinery. In many colleges distinct courses in mechanical engineering and in the mechanic arts are not offered, the two being united. Some local differences in the courses will be found, too, resulting from dissimilar industrial conditions and from demands for special kinds of skilled labor.

Two institutions—the Institute of Technology, at Boston, and the

Alabama Polytechnic Institute—have distinctly made mechanics, theoretical and applied, the most prominent features of their organizations.

The following is the mechanical engineering course of the University of Tennessee:

SOPHOMORE YEAR.

	Hours per week.	
	First term.	Second term.
Trigonometry, analytical geometry, and calculus	5	5
Descriptive geometry, mechanics	2	2
Chemistry	3	5
Drawing	3	3
Shopwork	3	3
Military tactics	1	1

JUNIOR YEAR.

Determinants, calculus, least squares, mathematics	3	3
Theoretical mechanics	3	3
Kinematics, mechanics	3	3
Materials, mechanics	3	3
Physics	3	3
Drawing	3	3
Shopwork	3	3

SENIOR YEAR.

Theoretical mechanics	5	3
Prime movers, mechanics	2	3
Physics	3	3
Machine designing	3	3
Machine construction, mechanic arts	3	3
Expert work, mechanic arts	3	6
Thesis		

The equipment of the shops for the work in mechanics and mechanic arts of this course has been described above.

The following excellent course is offered by the University of Wyoming. It may be taken as typical of the work being done in the more progressive of the Western States:

Course of Study, College of Mechanic Arts, University of Wyoming.

	Fall term.	Algebra.	Rhetoric.	Physics.	Free-hand drawing.	Elocution.
Freshman.	Winter term.	Algebra.	Bookkeeping.	Physics.	Free-hand drawing.	Elocution.
Sophomore.	Spring term.	Geometry (plane).	Bookkeeping.	Rhetoric (advanced).	Mechanical drafting.	Rhetorical work.
	Fall term.	Geometry (plane).	French or German.	Physics (advanced).	Mechanical drafting.	Rhetorical work.
	Winter term.	Geometry (solid).	French or German.	Descriptive geometry.	Mechanical drafting.	Rhetorical work.
	Spring term.	Trigonometry.	French or German.	Surveying.	Mechanical drafting.	Rhetorical work.
Junior.	Fall term.	Differential calculus.	French or German.	Inorganic chemistry.	Mechanical drafting.	Rhetorical work.
	Winter term.	Integral calculus.	French or German.	Chemistry tests and metals.	Analytical geometry.	Rhetorical work.
	Spring term.	Analytic mechanics.	French or German.	Mechanics of materials.	Kinematic drawing.	Rhetorical work.
Senior.	Fall term.	Analytic mechanics.	English literature.	Thermodynamics.	Elements of mechanism.	Rhetorical work.
	Winter term.	Steam engine.	Astronomy.	Machine design.	Machine drafting.	Thesis work.
	Spring term.	Electricity and magnetism.	Hydraulics.	Laboratory work in engineering.	Thesis work completed.	

In Arizona one of the most important questions with which the farming communities have to deal is that of irrigation. The manner in which this is made a prominent feature in the engineering course of the University of Arizona is here shown, beginning with the second term of the junior grade:

JUNIOR YEAR.

<i>Winter term.</i>	<i>Spring term.</i>
Higher algebra.	Analytical geometry.
Chemistry of soils.	Physics.
Geology.	Irrigation hydraulics.
German.	Hydraulic practice.
Drawing.	German.

SENIOR YEAR.

<i>Fall term.</i>	<i>Winter term.</i>	<i>Spring term.</i>
Calculus.	Farm and irrigation laws.	Canals, reservoirs.
Meteorology.	Hydraulics.	Political economy.
Astronomy.	Calculus.	Strength of materials.
Hydraulics.	Constitutional history.	German.
German.	German.	Field practice.
Hydraulic practice.	Engineering, practice.	

The following course in mechanic arts, offered by the Pennsylvania State College, illustrates the manner of division of studies and shopwork and drawing adopted in that college. The department is thoroughly well equipped for its work:

Pennsylvania State College, course in mechanic arts.

Year.	Sessions.	Studies.	Hours per week.	Shopwork and drawing.	Hours per week.
First ..	Fall	United States history	3	Carpentry	6
		Arithmetic	4	Free-hand drawing	4
		Advanced English analysis	5		
	Winter ..	Algebra, begun	5	Carpentry and joinery	3
		English	5	Model and object drawing	5
		United States history	5		
	Spring..	Algebra	5	Wood turning	8
		English analysis	5	Designing	4
		Book-keeping	4		
Second	Fall	English composition	5	Pattern making	4
		Algebra	5	Geometrical drawing	4
		Physics	4		
	Winter ..	Geometry	5	Forging	4
		Algebra	5	Orthographic projection and intersections	5
		Physics	4	Forging	4
	Spring..	Geometry and algebra	7	Mechanical drawing	6
		Applied arithmetic	3		
		Civil government and English	5		
Third .	Fall	Algebra and geometry	6	Vise work	8
		Workshop appliances	4	Mechanical drawing	8
		Geometry	3	Machine tool work	8
	Winter ..	Trigonometry	3	Detail drawing	8
		Rhetoric	4		
		Trigonometry and surveying	5	Machine tool work	10
	Spring..	Mechanism	3	Machine drawing	10

AGRICULTURAL AND MECHANICAL INSTRUCTION FOR COLORED STUDENTS.

In section 1 of the act of Congress approved August 30, 1890, for the more complete endowment of colleges of agriculture and the mechanic arts, it is especially provided—

That no money shall be paid out under this act to any State or Territory for the support and maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this act, if the funds received in such State or Territory be equitably divided as hereinafter set forth.

And further, that the legislature of any State or Territory establishing and maintaining such separate institutions for white and colored students, respectively—

May propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under the act, between one college for white students, and one institution for colored students established as aforesaid, which shall be divided into two parts and paid accordingly.

As a matter of fact, in only sixteen of the States has any division of the fund received been even considered. In most of the Southern States institutions for the education of persons of the colored race had already been in operation before the passage of the act; and this was notably the case in Alabama, Florida, Louisiana, Mississippi, and Virginia. In the few instances where no such school was supported or subsidized by the State, institutions of the character designated in the act of Congress have recently been established or selected as State beneficiaries of the Federal endowment. All of these are not, however, recognized as separate and distinct institutions, several of them being organized as branch colleges or departments of the colleges or universities for whites. This is true in Arkansas, in Georgia, in Maryland, in North Carolina, in Tennessee, and in Texas. There are thus in the South, including these branch colleges, sixteen schools receiving both State and Federal aid and offering industrial and agricultural training to the colored youth. They are:

1. State Normal and Industrial School of Alabama, at Normal P. O., Ala.
2. Branch Normal College of Arkansas, at Pine Bluff.
3. Delaware Agricultural College, for colored students, at Newark, Del.
4. Florida State Normal School, at Tallahassee.
5. Industrial College of University of Georgia, at Savannah.
6. State Normal College of Kentucky, at Frankfort.
7. Southern University of Louisiana, at New Orleans.
8. Eastern Branch of Maryland Agricultural College, at Princess Anne, Md.
9. Alcorn Agricultural and Mechanical College of Mississippi, at West Side.
10. Lincoln Institute of Missouri, at Jefferson City.
11. Shaw University of North Carolina, at Raleigh.
12. ————
13. Industrial Department of University of Tennessee, at Knoxville.
14. Prairie View Normal College of Texas, at Hempstead.
15. Hampton Normal Institute of Virginia, at Hampton.
16. West Virginia Institute at Farm, Kanawha County.

The manner in which the fund received from the Federal Government has been divided between the races has differed somewhat in the several States. The act provides for legislative acceptance of the terms thereof before any part of the first installment could be paid to any State; but where this was not possible, no legislature being in session, the governor of the State was allowed to signify the consent of the State. In several instances this gave rise to some difference of opinion as to what constituted "a just and equitable division."

It thus soon became apparent that for the satisfactory and successful working of the law, some definite rule of division should be adopted. The Secretary of the Interior, therefore, suggested that the ratio of the school population of the races be fixed upon as a basis of apportionment, and this has been generally agreed to. In some cases this ratio is determined by the States themselves, in others the ratio as fixed by the last census has been accepted. Again, in several instances, where the colored school receiving Federal aid is established as a department of the white institution, no regular division has been made at all, it having been decided that the maintenance of such a colored department meets the requirements of the law as making no distinction of race or color.

Much, of course, may be said as to whether, after all, the division according to school population is the most just and equitable that could be devised, especially in such States as Louisiana and Mississippi, where the proportion of colored students in the schools of the State is greater than that of white students; for it must be remembered that the aid offered by the Government is for *colleges*, that is, for purposes of higher education, and the number of white students receiving collegiate instruction is clearly greater than that of colored students receiving similar instruction. In Louisiana, for instance, even in the Southern University—the colored beneficiary of the act of Congress of 1890—the course of study pursued by the greater number of the students is really that of the common school. It would thus seem that an apportionment upon the basis of the numbers respectively enrolled in the higher institutions of learning would more nearly comply with the spirit of the act of Congress; certainly, however, it must be conceded that the ratio of school population forms the most stable and the simplest basis for the division, and since but little objection has been made to it, perhaps no more satisfactory division and none more politic is possible. Indeed, it seems not unlikely that one of the ultimate effects of the endowment of the schools for the education of colored students will be to raise the percentage which the number of colored students enrolled in higher institutions of learning bears to the total colored school population, until it more nearly equals the ratio which exists between the number of students enrolled in the white colleges and the total white school population. When this shall have been accomplished, then such apportionment can truly be said to be most equitable.

The following table will show the manner in which the last—the third—yearly installment has been divided. It will be understood that the act provides for an annual increase of \$1,000 in the amount to be paid to each State, beginning with 15,000 in 1890, such yearly increase to continue until the annual appropriation to each State reaches \$25,000.

States.	Amount of third installment received by white institutions.	Amount of third installment received by colored institutions.	Percentage received by white institutions.	Percentage received by colored institutions.
Alabama	\$9,557.76	\$7,442.24	.56+	.43+
Arkansas	12,363.64	4,636.36	.72 ^a ₁	.27 ^a ₁₁
Delaware	13,600.00	3,400.00	.80	.20
Florida	8,500.00	8,500.00	.50	.50
Georgia	11,303.33 ¹ ₃	5,666.66 ² ₃	.66 ² ₃	.33 ¹ ₃
Kentucky	14,535.00	2,465.00	.85 ¹ ₂	.14 ¹ ₂
Louisiana	8,232.66	8,767.34	.42+	.57+
Maryland				
Mississippi	7,621.97	9,378.63	.44+	.51+
Missouri	15,053.38	1,941.62	.88+	.11+
Tennessee				
Texas	12,780.00	4,250.00	.75	.25
Virginia	11,333.33 ¹ ₃	5,666.66 ² ₃	.66 ² ₃	.33 ¹ ₃
West Virginia	14,000.00	3,000.00	.82 ² ₁₇	.17 ¹ ₁₇

a Fund not divided.

It is a fact worthy of notice that of these schools no less than seven have the distinctive title of "normal" institutions, and almost all of them offer some normal training as part of their course of study. The explanation, however, is not far to seek. It is simply the outcome of the educational conditions prevalent in the South immediately after the civil war. The idea was quite generally accepted that in order to secure the success of the attempts to educate the newly freed race it was necessary that they should find leaders and teachers among their own number—an idea that was adopted as the policy of many of the States, and material assistance was given to the movement by the establishment and partial support of schools for the training of colored teachers. Each State soon had its colored normal school, although the introduction of manual and industrial training has to some extent encroached upon the normal course and diverted the schools from their original singleness of purpose.

This normal education, indeed, has had a certain salutary effect upon the colored public school system of these States, not so much perhaps from the real efficiency of the so-called "normal training" as from the fact that the general standard of the students sent out to fill the positions of teachers in the public schools has constantly tended to become higher, and their work as a consequence has been more intelligent. One of the greatest dangers of normal education—unless it be based upon purely scientific principles—is its tendency to destroy individuality, to substitute a rigid adherence to methods for the free exercise of judgment and natural common sense. It is almost invariably true, however, that the colored student, transplanted from the normal institute into the schoolroom, soon loses whatever effect of "teaching by

rule" he may have acquired, and conducts his school precisely as he would have done did no such thing as normal training exist. Not that his sojourn at the institute has been of no service to him—quite the contrary, but the real benefit he has derived from it is the advantage of the thorough course of instruction in the various branches of a liberal education there afforded.

But with the introduction of the agricultural and mechanical features and of the provisions for the industrial training of women, these normal schools to-day perform a different and perhaps a more important function. Thanks to the liberal assistance of the States and of the General Government, they are at present very fairly equipped with facilities for instruction in the useful arts. Especially since they have become the recipients of a portion of the endowment fund of 1890 have they made rapid strides toward the thorough fitting out of their farms and workshops. Since tuition is generally free, and students are given every opportunity to support themselves while attending the schools, there is now really very little to stand in the way of any young colored man or woman who desires to secure the benefits of an industrial education.

As a rule the claims and avowed purpose of these institutions are very modest. Their aim is in most cases simply to turn out practical men and women. Their graduates are able to step from the school into the workshop or the field as skilled mechanics or farmers, or, in the case of women, are able as teachers, housekeepers, domestics, or needlewomen, to earn for themselves a competent and respectable livelihood.

About twenty-five hundred pupils of both sexes are now being educated in these schools at the least possible expense, and it may not be too much to predict that their popularity will increase to such an extent with the further development of the industrial departments that the next five years will see their attendance almost doubled and their sphere of usefulness greatly extended.

The trials through which such institutions have had to strive to reach a footing of comparative security have been truly great; there have been periods in the history of almost everyone when failure seemed inevitable. The acts of Congress have now made their position a very safe one. One of their most serious difficulties has heretofore been that of securing continuous attendance on the part of students. Only during the months when farm hands were not needed—a very brief period of the year in the Southern States—would the rolls reach satisfactory figures. The same trouble was of course experienced with girls. As a remedy for this serious hindrance to the school work, the establishment of farms and workshops in connection with the institutions themselves, where labor is offered and reasonably paid for, has worked most admirably. Since 1890 the complaint of irregular attendance is heard much less frequently.

But the most widely felt check to progress in the schools for colored students is the almost total lack of preparation with which the pupils enter the course. As a consequence, a great part of the four or five years of their attendance is occupied in getting them ready for the real work of the school. The conditions responsible for this trouble are, it is true, to some extent improving, but the question is still a burning one. Until more efficient work is secured in the lower grades of the colored public schools, the standard of the colleges, at least in those branches which go to make up a liberal education, must remain unfortunately low.

In several institutions three or four distinct courses of study are offered, but in most the instruction is nearly uniform, except in the industrial training of the sexes. The basis of the course is laid in the study of the English language and literature, mathematics, elementary natural and physical sciences, and generally the duties of citizenship. To this foundation three different kinds of practical instruction are added, namely: Agricultural science, with labor in the field; the principles of mechanics, with labor in the shops; and the industrial training of girls in the departments of household economy and the domestic arts.

And here it seems proper to state, that to institute any comparison between the work of these schools for the industrial education of the colored race and the work of those colleges and universities which, as beneficiaries of the Federal endowment acts, are designed for the training of the white youth of the land would be manifestly unjust to both classes of institutions for two very logical and sufficient reasons: First, the students, drawn from widely separated walks of life, reach the school with preparation wholly unlike, both in kind and in degree; they must therefore receive entirely different treatment. Secondly, whatever may be the dreams of those philanthropists interested in the elevation of the colored race, the fact remains a stubborn one that the positions in the social fabric which they respectively may expect to fill can never be the same; hence the instruction offered must be designed for different purposes. In the schools for whites we may almost say that all practical instruction is but to demonstrate the theory; in the colored schools, that all theoretical instruction is but to explain the practice.

The facilities for instruction in those branches which form the basis of scientific agriculture have, until the last few years, necessarily been somewhat meager in the colored schools; nor have the conditions under which most of the colored youths find place in these institutions admitted of much detailed laboratory work; and yet the instruction given in agriculture has been of no less real value than that of other agricultural colleges, for the lack of time for technical work is more than counterbalanced by the greater amount of practical information acquired by constant farm labor.

All of the colored agricultural schools have some farm land; many of them possess really valuable farms, and upon these the students do not merely observe the manner in which the farming operations are conducted, but they are themselves the actual farmers. In more than one such college all the labor expended in the cultivation of the soil is performed by students. The same plan is very generally followed in the mechanical shops, where, after receiving instruction in the handling of tools and the first principles of mechanics, the student is expected to labor productively. The furniture and household utensils used in the college, the simpler implements of husbandry, and often the shoes which they themselves wear are the products of student labor. To such an extent is this utilitarian idea sometimes carried that they are able to build and furnish any new buildings required for the use of the school. Among the trades most commonly taught are carpentry, brick making and laying, blacksmithing, shoemaking, mattress-making, house-painting, turning, and printing.

It of course follows, that while such schools may and do turn out many skilled laborers, they produce but few master mechanics. Their graduates have no difficulty in securing work, as the demand for intelligent skilled labor is a constant quantity. As long, then, as they send forth young men, who, with a sound general education and the self-respect which the consciousness of such a possession is sure to engender, have been thoroughly trained in the management of farms, the use of machinery and the handling of tools, there can be no reasonable objection raised to the manner in which they fulfill the purposes of their organization, and no legitimate excuse for any change in their policy and their methods.

MILITARY INSTRUCTION IN COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS.

Perhaps no department of instruction maintained by the institutions whose work is described in the present report has been the subject of more criticism and adverse comment than that which aims to add to the general and technical education offered by them some knowledge of military science and some training in the use of arms and the discipline of the field and barracks.

As we have seen from our examination of the several acts of Congress in aid of colleges of agriculture and the mechanic arts, and from the preceding review of the growth and development of these colleges, and the already highly satisfactory results achieved by them, the General Government has maintained towards such institutions a most generous policy from the first. Instruction in the liberal arts and practical industrial training have been thus placed within the reach of all desirous of profiting thereby. A great stride has been made towards the goal at which all enlightened modern nations have been aiming—

the higher education of the industrial classes. In this we have an exhibition of what the State has done for the individual.

In speaking of the heretofore somewhat widespread feeling of aversion to the introduction of military training in colleges of agriculture and the mechanic arts—a feeling which, while by no means confined to the farming element of their patronage, has certainly received its most frequent and open expression from that quarter—it is but just to the spirit of fair-minded American patriotism to say that such opposition has arisen from ignorance of the ends proposed by such instruction and from a lack of appreciation of the true value to the body politic of the military training of the youth of the land. To convey as clear an idea as possible of the purpose and plan of these departments of military science and tactics and the beneficial results to be derived from them by the State and by the students, it will be well to consider the subject under the following distinct heads:

I. How they have been provided for, and how these provisions have been met.

II. What is expected of them on the part of the State.

III. The manner in which they are of benefit to the college of whose organization they form a part.

IV. The manner in which they benefit individual students.

PROVISIONS FOR DEPARTMENTS OF MILITARY SCIENCE.

In section 4 of the original land-grant act of Congress of 1862 it is provided that the interest of the invested proceeds from the sale of granted land or scrip shall be appropriated "by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, etc." The act of 1890 being for the more complete endowment of colleges established in accordance with the act of 1862, may fairly be considered as containing the same provision.

In order to render practicable the carrying out of the purpose in thus including military tactics in the course of study to be offered by the endowed colleges, an act was passed and approved July 2, 1866, providing for the detail of army officers to act as instructors in such colleges. This act, as amended by the act approved September 26, 1888, is as follows:

SEC. 1225. The President may, upon the application of any established military institute, seminary or academy, college or university within the United States, having capacity to educate at the same time not less than one hundred and fifty male students, detail an officer of the Army or Navy to act as superintendent or professor thereof; but the number of officers so detailed shall not exceed fifty from the Army and ten from the Navy, being a maximum of sixty, at any time, and they shall be apportioned throughout the United States, first, to those State institutions applying

for such detail that are required to furnish instruction in military tactics under the provisions of the act of Congress of July second, eighteen hundred and sixty-two, donating lands for the establishment of colleges where the leading object shall be the practical instruction of the industrial classes in agriculture and the mechanic arts, including military tactics; and after that said details to be distributed, as nearly as may be practicable, according to population. The Secretary of War is authorized to issue, at his discretion and under proper regulations to be prescribed by him, out of ordnance and ordnance stores belonging to the Government, and which can be spared for that purpose, such number of the same as may appear to be required for military instruction and practice by the students of any college or university under the provisions of this section, and the Secretary shall require a bond in each case, in double the value of the property, for the care and safe-keeping thereof and for the return of the same when required: *Provided*, That nothing in this act shall be so construed as to prevent the detail of officers of the Engineer Corps of the Navy as professors in scientific schools or colleges as now provided by act of Congress approved February twenty-sixth, eighteen hundred and seventy-nine, entitled "An act to promote a knowledge of steam engineering and iron ship-building among the students of scientific schools or colleges in the United States;" and the Secretary of War is hereby authorized to issue ordnance and ordnance stores belonging to the Government, on the terms and conditions hereinbefore provided, to any college or university at which a retired officer of the Army may be assigned, as provided by section twelve hundred and sixty of the Revised Statutes.

In January, 1891, the following act amendatory of the above act was approved.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section twelve hundred and twenty-five of the Revised Statutes, concerning details of officers of the Army and Navy to educational institutions, be, and the same is hereby, amended so as to permit the President to detail, under the provisions of said act, not to exceed *seventy-five* officers of the Army of the United States; and the maximum number of officers of the Army and Navy to be detailed at any one time under the provisions of the act passed September twenty-sixth, eighteen hundred and eighty-eight, amending said section twelve hundred and twenty-five of the Revised Statutes, is hereby increased to eighty-five: *Provided*, That no officer shall be detailed to or maintained at any of the educational institutions mentioned in said act where instruction and drill in military tactics is not given: *Provided further*, That nothing in this act shall be so construed as to prevent the detail of officers of the Engineer Corps of the Navy as professors in scientific schools or colleges as now provided by act of Congress, approved February twenty-sixth, eighteen hundred and seventy-nine, entitled "An act to promote a knowledge of steam engineering and iron shipbuilding among the students of scientific schools or colleges in the United States."

In the regulations in regard to such details of officers of the Army, made by the President, the time of every such detail is fixed not to extend over three years. Certain classes of officers are named as not eligible for selection, and the forms of applications for details from colleges and of applications from officers desiring to be detailed are prescribed. It is also declared that—

Where a State has more than one school endowed by the national land grant, under the act approved July 2, 1862, the school which is reported by the governor of the State as most nearly meeting the requirements of existing law will be held to have the first claim to the officer attached to the State for detail at a land-grant college.

In compliance with that portion of section 1225 of the Revised Statutes which provides for the first allotment of officers to land-grant colleges and their secondary distribution among the States according to population, the following apportionment has been adopted, based upon the census of 1890.

It will be seen from this table that of the seventy-five officers to be detailed under the act as amended in 1891 forty-four are assigned to duty at colleges established or maintained by the fund derived from the land-grant act of 1862.

Apportionment of details of Army and Navy officers.

States.	To land-grant colleges.		Under secondary distribution according to population.		Total Army.	Total Navy.
	Army.	Navy.	Army.	Navy.		
Maine	1		3		7	2
New Hampshire		1				
Vermont	1					
Massachusetts	1		4		5	
Rhode Island		1				
Connecticut	1					
New York	1		1		3	
New Jersey	1					
Delaware	1					
Pennsylvania	1		3	1	5	1
West Virginia	1					
Maryland	1					
District of Columbia			2		4	
Virginia	1					
North Carolina		1				
South Carolina	1		2	1	6	1
Georgia	1					
Alabama	1					
Florida	1		2	1	5	1
Mississippi	1					
Louisiana	1					
Texas	1		1		2	
Arkansas	1					
Tennessee	1					
Kentucky	1		4		6	
Ohio	1					
Michigan	1					
Indiana	1		4		6	
Illinois	1					
Missouri	1					
Wisconsin	1		2	1	2	1
Minnesota	1					
Iowa	1					
Nebraska	1		1		4	
South Dakota	1					
North Dakota	1					
Kansas	1		1		2	
Oklahoma						
Colorado	1					
Wyoming	1		1	1	7	3
Montana	1					
Idaho	1					
Washington		1	1		7	3
Oregon		1				
California	1					
Nevada	1					
Utah						
Arizona						
New Mexico						
Total	39	5	36	5	75	10

Under the regulations prescribed by the Secretary of War for the issue of arms, etc., each college, at which an officer is stationed, may,

upon the filing of a bond covering double the value of the property, receive the following facilities for instruction and drill in military tactics, or as much thereof as may be required:

2 3-inch rifled guns, wrought iron, model 1861.....	\$900.00
2 carriages and limbers, 3-inch gun.....	650.00
2 gunner's haversacks.....	6.70
2 handspikes, trail.....	2.00
4 lanyards.....	.40
2 priming wires.....	.20
4 sponges and rammers, 3-inch.....	4.00
4 sponge covers, 3-inch.....	1.20
2 tube pouches.....	3.00
4 thumbstalls.....	.80
2 tompions, 3-inch.....	.60
2 vent covers.....	.80
1 pendulum hausse, 3-inch.....	2.50
1 pendulum hausse seat.....	.60
1 pendulum hausse pouch.....	.75
2 paulins, 12x15 ft.....	23.50
150 Springfield "cadet" rifles, cal. 45, with appendages, etc.....	2,250.00
150 bayonet scabbards, steel, cadet.....	136.50
150 waist belts and plates.....	75.00
150 cartridge boxes, cal. 45.....	187.50
Total value of equipment.....	4,246.05

Upon requisition, allowances of ammunition for practice firing will be made to each institution.

The following are the regulations prescribed by the President for the government of the detailed officers:

1. DUTIES OF OFFICERS.

The professor of military science and tactics shall reside at or near the institution to which assigned, and when in the performance of his military duties shall appear in proper uniform. Officers so detailed shall, in their relations to the institutions, observe the general usages and regulations therein established affecting the duties and obligations of other members of the faculty. For the benefit of the officer and the military service, he may perform other duties at the college in addition to those pertaining to military science and tactics, and may receive such compensation therefor as may be agreed upon.

2. ORGANIZATION AND DISCIPLINE.

All rules and orders relating to the organization and government of the military students; the appointment, promotion, and change of officers; and all other orders affecting the military department, except those relating to routine duty, shall be made and promulgated by the professor of military science and tactics, after being approved by the president or other administrative officer of the institution.

2. It is the duty of the professor of military science and tactics to enforce proper military discipline at all times when students are under military instruction, and in cases of serious breaches of discipline, or misconduct, to report the same to the proper authorities of the institution, according to its established methods. Upon occasions of military ceremony, in the execution of drills, guard duty, and when students are receiving any other practical military instruction, he shall see that they appear in the uniform prescribed by the institution.

3. COURSE OF INSTRUCTION.

1. The course of instruction shall be both practical and theoretical, and shall be so arranged as to occupy at least one hour per week for theoretical instruction, and at least two hours per week for practical instruction.

2. The practical course in infantry shall embrace small-arm target practice, and, as far as possible, all the movements prescribed by the drill regulations of the U. S. Army applicable to a battalion. Instruction in artillery shall embrace, as far as practicable, such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, aiming drill, saber exercise, and target practice. Instruction should also include the duty of sentinels, and, where practical, castrametation. Such instruction shall be given by the professor of military science and tactics personally, or under his immediate supervision.

3. Theoretical instruction shall be by recitations and lectures, personally conducted and given by the professor of military science and tactics, and shall include, as far as practicable, a systematic and progressive course in the following subjects: The drill regulations of the U. S. Army, the preparation of the usual reports and returns pertaining to a company, the organization and administration of the U. S. Army, and the elementary principles governing in the art of war.

4. REPORTS.

He shall render a quarterly report to the Adjutant-General of the Army, of the whole number of undergraduate students in the institution capable of performing military duty, the number required by the institution to be enrolled as military students, the average attendance at drills, the number absent, the number and kind of drills, recitations and lectures, or other instruction had during the quarter, and the number reported for discipline. Copies of all reports and correspondence will be retained by the professor of military science and tactics, and transferred by him to the officer who may succeed him, or forwarded to the Adjutant-General's Office, should the detail expire. On the graduation of every class he shall obtain from the president of the college and report to the Adjutant-General of the Army the names of such students as have shown special aptitude for military service, and furnish a copy thereof to the adjutant-general of the State for his information. The names of the three most distinguished students in military science and tactics at each college shall, when graduated, be inserted on the U. S. Army Register and published in general orders.

5. INSPECTIONS.

The military department shall be subject to inspection under the authority of the President of the United States; such inspections to be made, when practicable, near the close of the college year. The inspecting officer shall, upon his arrival at the institution, report to the president or other administrative officer, in order to obtain from him the necessary facilities for the performance of his duties. A copy of the report of inspection will be furnished the president of the institution by the War Department.

In accepting the aid offered by the Government in the acts of Congress of 1862 and of 1890, and thereby binding themselves to include instruction in military science and tactics in the course of study of the agricultural and mechanical colleges, the States have impliedly covenanted to provide such other facilities for such instruction as are not given by the Government under the 1225th section of the Revised Statutes and the regulations prescribed in pursuance thereof by the President and the Secretary of War. In general, such provision

has been fully made. In many colleges a neat and inexpensive uniform has been adopted, and its use required in all military exercises. In almost all, too, an armory has been fitted up for the use of the officer detailed, and now, in a great many instances, separate buildings for the purpose—often serving as drill hall and gymnasium—have been erected. Drills are held on the campus of the college, weather permitting, and at but few institutions are the grounds not large enough to afford at least one good target range. In some of the States, officers upon graduation are given commissions in the State militia.

The course of instruction in military science and tactics usually embraces, besides the regular infantry drill three or more times a week, the study of the prescribed manual of infantry tactics, lectures to the upper classes on military history, military organization, and sometimes the construction of ordnance and military law.

WHAT IS EXPECTED OF THE DEPARTMENTS OF MILITARY SCIENCE.

In return for the opportunities afforded to young men to acquire at the least possible expense the benefits of a thorough and practical industrial education, the Government asks only that these students be required to receive such instruction in military science and tactics as will render their service useful and efficient in time of invasion or internal disturbance; that they may be prepared, should the necessity arise, to serve as qualified subordinate officers; may be able to organize and drill volunteer companies; and may become so far acquainted with the duties and methods of field and camp life, that the many drawbacks incident to the equipment and getting into the field of raw recruits may be to some extent overcome.

In a country such as ours, where the evil of a great standing army would be both intolerable and unnecessary, it is to the citizen-soldiers that the Government must look in time of need. Unquestionably much can be expected of the State militia, but in cases where this resource has been exhausted, or where sectional issues divide the allegiance of the militiamen and calls for volunteers become necessary, the existence of a body of young men ready to undertake the organization and preparation of such volunteers for service is an advantage not to be overestimated. The beneficial results of the training given by the many military institutes of the South were clearly demonstrated in the late civil war.

Taking the idea for granted that all good and loyal citizens are always ready and eager to lend their service and risk their lives in behalf of the country when engaged in a just cause, it seems but little to ask in return for the fostering care extended to these educational institutions that those who profit by the Government endowments should prepare themselves to bring to the country's aid not only willing but skilled service. The amount of time required from the daily routine of college work is so small, and the incidental advantages to

the colleges and to the individuals so great, that, view it in whatever light we may, the benefit is still clearly on the side of the student.

HOW THE DEPARTMENTS OF MILITARY SCIENCE AND TACTICS BENEFIT THE COLLEGES
THEMSELVES.

While, as has been before stated, no little objection has in the past been raised to the maintenance of the military departments of the State colleges, the fact nevertheless remains that these very departments have been instrumental in materially increasing their patronage. The military feature may be said to be a drawing card, attracting many young men to the colleges who would not otherwise be induced to enter college life. The popularity of the military departments is everywhere commented upon, and is conceded to be an increasing rather than a diminishing quantity. Proof of this may be had by examining the records of those institutions where military instruction is not required by law and where it has been made optional.

Again, the departments of military science and tactics serve to complete and properly round out what would otherwise often be a somewhat one-sided organization. They give a distinctive and generally healthy tone to the institutions of which they form a part. Where, as in many colleges, the discipline is to a greater or less degree of a military character, the order and system thus secured in routine work and the habits of neatness and promptness and unhesitating obedience inculcated render the harmonious working of the many separate and technical departments possible. The question of college discipline has of late years become a very serious one, and educators would be glad indeed to welcome any solution of it that would afford a reasonable settlement of the struggle between the opposing principles of central governing power and individual liberty. For the present it would seem however, that in institutions below the grade of the university, which educate students in purely collegiate courses, the most satisfactory system yet devised is that of a carefully adjusted and wisely administered plan of military discipline.

Still another benefit arising to the college from the military feature is the spirit of emulation and healthy competition excited by the bestowal of the honors of the military organization upon the most deserving members of the corps. And here it is but proper to say that the success or failure of the department, and often indeed of the work of the whole institution, depends peculiarly upon the army officer detailed. With tact and energy and enthusiasm his work may not only be made self-sustaining, but may be highly conducive to the general welfare of the school. An indifferent, weak, or indiscreet officer will inevitably do much more harm than good. A very decided stimulus to those who become particularly interested in the work of the military department is the provision that "the names of the three most distinguished students in military science and tactics at each college shall, when grad-

uated, be inserted in the U. S. Army Register and published in general orders." The same result is in a measure accomplished by the annual inspections.

HOW THE MILITARY INSTRUCTION IS OF ADVANTAGE TO STUDENTS.

The beneficial effect of military training upon the students themselves needs hardly be dwelt upon. It affords that most necessary of all things to a growing youth—plenty of regular exercise. Its effects are both physical and moral. The preliminary calisthenics and the daily drill are of such a nature as to develop every muscle of the body. The correct carriage and the complete control over the limbs, soon acquired, while eminently conducive to grace and ease of motion, at the same time strengthen the lungs, broaden the chest, and secure a normal position and action of all the organs. If nothing else, the drill is clearly healthy.

More than this, the training in the school of the soldier renders the student self-reliant and manly. By teaching him the lesson of absolute obedience, it makes him capable of commanding others; and by requiring strict attention and absolute accuracy in everything undertaken, it instills habits of order and promptness, which must ever prove of the highest advantage to him in every walk of life. Finally, it furnishes a relief from the daily routine of study and recitation and lectures that no other form of labor or amusement can exactly supply, combining enough of physical exertion and mental excitement to constitute a perfect exercise.

The report of the Adjutant-General of the United States for 1891 places the number of students receiving military instruction in fifty-seven colleges at about seventy-four hundred.

AGRICULTURAL EXPERIMENT STATIONS.

Experimental agriculture is, of course, no new thing. Ever since men began to look to the cultivation of the soil for the gratification of their wants, much of the labor expended in this direction has been of an experimental nature. Indeed, one may say that until the present century the practice of experimental agriculture was even more widespread than it is to-day, since every agriculturist engaged in it to a certain extent upon his own land and for his own benefit. Such agricultural knowledge as was matter of common property consisted in a number of crude rules and superstitions handed down by word of mouth through successive generations until they passed into the realm of the proverbial; and where, as was frequently the case, they were based upon a lack of understanding or a misunderstanding of the laws of nature, they have been the hardest of all popular errors to eradicate, since they are the deepest rooted. While the changes and discoveries and general improvements in almost every other department of human industry have been constant and rapid,

the increase and the spread of agricultural knowledge have been slow indeed, resulting partly from the social condition of those engaged in tilling the soil, partly from the fact that men's minds have been more engaged with commerce, with philosophical and religious controversies, and with the struggle for forms of government and political supremacy, than with the peaceful arts of husbandry; but improvements in agricultural methods have been especially retarded, because the true key that was to unlock the secrets of nature has so long been lacking. Science was not, and without it advancement was impossible. Modern science is to agriculture what steam and electricity have become to the commercial and social intercourse of nations. It has simply made great results practicable. The first applications of agricultural chemistry by Liebig in 1840 opened the way. Then, for the first time, agriculturists began to hope for a little more light upon questions which their forefathers were wont to regard as beyond the range of human thought to solve or human ingenuity to influence; and agriculture was reduced to a system. But even before this time causes had begun to operate which served to turn the attention of European nations towards the cultivation of the soil. By the close of the eighteenth century, the true value of the science of political economy had begun to be realized. The physiocratic idea of agriculture as the one source of wealth had taken considerable root in France, and Adam Smith's "Wealth of Nations" had been published in England. The new science pointed out the relations of the manual industries to each other, and to the State, and demonstrated the dependence of the nation upon the farm and the farmer. As a result, the first agricultural experiment station had been projected in England by Sir John Bennet Laws, and while no startling improvements in agriculture immediately followed this effort, the wisdom of the plan was seen by continental landowners, and within ten years several more successful attempts were made, stations being established at Moeckern, Saxony, and at several other places in Germany, in France, and in England. The work of these stations was necessarily of a crude and often of an absurd character; there were, of course, but few facilities for anything like accurate, scientific investigations; and the newness of the field, the many difficulties of ignorance and prejudice to be overcome, and the almost absolute dearth of literature upon the whole subject made the task of organization and of formulating schemes of work a truly formidable one.

Until the several governments, acting upon the advice of far-seeing economists, and recognizing the possibilities in such systematic research, lent their support and coöperation to these pioneers of agricultural science, the fate of the experiment stations hung trembling in the balance. But the introduction of truly scientific methods, and a few years of actual demonstration of the great results possible to be obtained by them, ultimately overcame the incredulity and suspicion with which they were at first regarded, and soon stations for agricul-

tural investigation and experimentation were generally established throughout northwestern Europe. In 1885 about one hundred and fifty such stations were in operation, and since that time their work has been so systematized and arranged that in France and Germany at least the departments of agriculture rank among the most efficiently administered of all the government institutions.

One feature of the system in vogue upon the continent, consequent upon the centralization of the direction of experimental work, is the assignment to many of the stations of particular lines of investigation, thus securing a maximum of definite results at a minimum of expense; but it may be said in favor of the American system—if system it may be called—that the actual value of the experiments performed, where the work of no station is restricted in its scope, is often greater by reason of repeated verifications at other stations. It is not the purpose of this article, however, to enter into a detailed account of the organization and workings of European stations. Let us briefly review the history of experimental agriculture in the United States.

If we examine the charters and the curricula of the institutions of learning established in this country prior to 1860, we shall find in several instances chairs of agriculture provided for. The work of these chairs was generally somewhat more than mere instruction in the principles of the science—then but little understood by the public—and it often extended to the conduct of experiments in the lines of ordinary farm management. With the passage of the act of Congress of 1862, for the endowment of colleges of agriculture and the mechanic arts, a new impetus was given to these investigations. While still not known by the specific name of "Experiment Stations," the chairs of agriculture were in reality performing the functions of such institutions—carrying on regular lines of experimentation and publishing the results for the benefit of the farming communities. The first experiment station calling itself by that name was established in 1875 by Mr. Orange Judd, at Middletown, Conn., coöperating with the university at that place. Other States soon followed the example set by Connecticut. In some cases the station was conducted as a department of the agricultural college; in others it was an entirely separate institution. Several of the colleges, established in compliance with the land-grant act of 1862, adopted this method of bringing their work in scientific agriculture to the notice of the public. In 1886, about twelve such stations were in operation. In that year, Mr. Hatch, in submitting the report from the Committee on Agriculture (to accompany H. R. 2933), offered the following statement as a summary of the beneficial results already obtained by the stations then in operation:

"Combining as they do the precision of scientific methods with an intelligent regard for the requirements of practical operations, it is not surprising that they have come to be looked upon wherever established as the most important aid to successful farming as well as the foremost agency for the advancement of agricultural

science. They have taught the most profitable methods of cultivation and fertilization with different soils and crops and the best ways of doing the thousand operations of daily work; have driven out of the markets inferior fertilizers, food stuffs, and seeds, thereby saving millions of dollars to the farming community; and by raising the productiveness of agricultural industry have to that extent helped to solve one of the hardest standing problems of society—how to relieve the pressure of population upon subsistence.”

In 1887 the bill, known as the “Hatch Experiment Station Act,” to establish agricultural experiment stations in connection with the colleges established in the States under the provisions of the endowment act of 1862, was passed by the Forty-ninth Congress and became a law. It provides for the establishment of experiment stations or for the maintenance of stations already established in each State and Territory, and appropriates the sum of \$15,000 annually for their support out of any money in the Treasury proceeding from the sale of public lands. It requires the sending of a full and detailed annual report of the operations of each station, with a statement of its receipts and expenditures, to the governor of the State or Territory in which such station is located, to the Departments of Agriculture and of the Treasury, and to every other such station. The bill also provides for the publication by said stations of at least quarterly bulletins, and for their distribution, all such reports and bulletins to be transmitted through the mails of the United States free of charge. In order to secure some uniformity in the work, certain supervisory powers are vested in the United States Department of Agriculture, where a division of experiment stations has been organized which issues periodically a record of the work of the stations. The several State and Territorial legislatures are allowed in their discretion to apply such funds as are thus appropriated, in whole or in part, to stations not connected with any college of agriculture, or to stations connected with institutions not wholly agricultural in their character. As it is not intended that the amount annually paid to any station shall exceed the sum necessary for its maintenance, any unexpended balance of a preceding annual appropriation is to be deducted from the next succeeding appropriation to that station. The assent of each State to the grants of money authorized by the act is to be made by the legislature thereof, or where the payment of the appropriation became due before the adjournment of the regular session of the legislature meeting next after the passage of the act, such assent might be made by the governor of the State. It will be seen that the act contains the following general outline of the work to be undertaken by the stations thus established and supported. They are—

To conduct original researches or verify the experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds;

the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese, and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

By the Fiftieth Congress it was provided that as far as practicable all such stations should devote a portion of their work to the examination and classification of the soils of their respective States and Territories. By the Fifty-first Congress it was provided that the appropriations to the stations should be paid quarterly in advance. Regulations have been prescribed for the free transmission of reports and bulletins as provided for under the original act.

The question of the advisability of connecting the experiment stations with institutions of learning has given rise to some difference of opinion, although it seems now quite generally conceded that such union is on the whole advantageous. The records show that a large percentage of those employed upon the staffs of the stations also give instruction in the colleges of agriculture. That the plan works admirably in most instances the bulletins of the stations as well as the reports from the chairs of agriculture and horticulture in the colleges abundantly testify. It is a mistake to suppose that such coöperation is merely a measure of economy; in fact, it may be questioned whether it is the most economical plan after all, since about as much is lost in the greater amount of time required both in experimental work and in instruction as is saved in the actual reduction of salary expense. The real benefit in the connection clearly lies on the side of the college, consisting in the very great assistance to the instructors in agriculture and horticulture, which may be derived from the use of the experimental farm land and equipment for purposes of practical illustration, and in the incalculable advantage to the student of the opportunities to witness and participate in the actual application of the scientific principles underlying modern agricultural methods and practice. Nor is this all. The experiments conducted at the station are, for the most part, peculiarly those of State and local interest, the solution of just such problems and the testing of just such methods as he as a farmer of that particular region will be called upon to employ. And not only is the student given theoretical instruction in the approved methods of farming operations, but he becomes acquainted with farm management, the use of agricultural machinery, and the care of live stock as well.

The claim has been made, even by some who, with a life-long experience in farming themselves, have failed to exactly comprehend the true object of experiment station work, that the station should be located in the most fertile and highly productive section of the State; and this argument has been repeatedly used in opposing the union of the college and the station. But, as a matter of fact, the station is primarily

interested in determining the possibilities of the *average* State land, and even a situation in the poorest section of the State is really preferable to one in the most fertile for this purpose. Where can better opportunities be found for testing the values of fertilizers and manures, the hardness of field and garden crops, and the returns from drainage and systematic crop culture than on land even a little below the average degree of fertility? It is by the successful management of what are known as waste lands that the experiment station is enabled to render the greatest benefit to the State at large. Nor is it to be imagined that a station thus located is precluded from carrying on such researches and experiments as relate to the cultivation of better and perhaps wholly different soils. While the experiment station is supposed to be a model farm, it does not by any means follow that it must also be a show farm; for if a model, then it must be such as is within the power of the average farmer to imitate.

As a rule the work of the experiment station is divided among several distinct departments, in order to facilitate business and secure uniformity of method. Under the charge of a director, who is frequently the agriculturalist or the chemist, the staff usually consists of from four to seven men, exclusive of laborers. In most stations the facilities for experimental work are very complete. Almost all are equipped with libraries consisting of technical works, the reports and bulletins of other stations in the United States and foreign countries, and books of general reference. The special departments usually established are those of agriculture, horticulture and botany, economic entomology, chemistry, and veterinary science.

As the investigations of the chemical department are such as require very delicate and accurate tests and measurements, the apparatus in these laboratories is generally of a very high grade and represents a large outlay of funds. To such an extent is this the case that as a whole the chemical laboratories of the agricultural experiment stations are the most completely and often the most expensively equipped in the country. This is hardly less true of the other departments of the station; the policy has everywhere been to procure the very best of tools and implements for experimental purposes.

The investigations carried on in the chemical laboratories of all the stations are essentially the same; the analysis of soils, fertilizers and manures, fodders and feed, milk, butter, etc. By law in many of the older States, where fertilizer manufacture is extensively engaged in, the State chemist is required to furnish analyses of all brands of fertilizers manufactured in the State, and of all such samples as may be sent in a proper manner to the station for the purpose by farmers and others interested.

The relation of the chemical laboratory to the other departments of the station is always an important one, as chemical analyses are necessary in nearly every stage of almost all experiments. A large propor-

tion of the bulletins issued, too, are the result of chemical investigation. In fact it may be said that the chemical laboratory is the central department of the station around which nearly all the others are grouped, each largely dependent upon it.

Another important and until recently but little explored field is that occupied by the station entomologist. Each section of the country has its insect pests injurious to the growing crops, the garden, the orchard, and vineyard, and to live-stock, against which the farmer has been obliged to wage continuous and often unsuccessful war. The labors of the entomologists have already been productive of surprising results. In most instances a beginning is made by collecting and classifying the insects of the State; these are then carefully studied with regard to their life history, foods, parasites, etc., and experiments undertaken looking to their destruction. In this work much is gained by the coöperation of the various stations in comparative entomological research.

While differing, of course, in detail, the general line of experimentation undertaken by the station agriculturalist and horticulturalists have also been practically the same everywhere, embracing variety tests of farm products with regard to their respective adaptability to soils and climates; the effect of different fertilizers and manures upon the yield; the value of food products for breadstuffs and domestic consumption, and the methods of preparing them for the market.

Considerable attention has been paid of late years to drainage and farm irrigation. In the older States, where injudicious cropping and the allowing of yearly waste have to a certain extent exhausted the chemical properties of the soil, the experiment stations have been aiming, and with a fair measure of success, at the restoration of the land to its former vigor by careful systems of rotation and soil dressing.

The result of the scientific study of horticulture has done much, particularly in the Atlantic States, to direct attention to the immense profits to be realized from the cultivation of orchard and small fruits and from truck gardening. Not only have growers been aided in securing better and more certain crops, but though learning the secrets of packing and storing they have been able to obtain better prices, and, within certain limits, to control the markets.

While thus in its general features the work of the experiment stations is the same in all the States, the particular line of investigation given prominence in various sections of the country is by no means the same. The immediate needs of the many agricultural regions of the United States differ widely as the result of natural differences of soils and climatic conditions, the varying degrees of cultivation through which the lands have passed, their location in respect to foreign and domestic markets, and the changes affected by the constant shiftings of the great lines of commerce.

In the Eastern States, where the fields have been cultivated for successive generations, and where now strict economy of the resources of

the soil is being observed, waste and exhaustion carefully avoided, and adequate returns in the form of fertilizers—natural and artificial—made after every crop, the question must inevitably resolve itself into one of substitution merely. The Eastern farmer, alarmed by the active competition of the West—a competition enhanced by the continually increasing facilities for transportation—has already begun to look about him for new and more remunerative uses for his land. What to grow in place of grain, and how to grow it? How can truck gardens, orchards, and vineyards be made to pay? What are the best methods in stock-farming and dairying? are some of the questions which the experiment stations of these States are being called upon to solve.

Again, in the South there is much land to be reclaimed and brought back from the state of total or partial desuetude into which it has lapsed through neglect or changed social or commercial conditions; and here different kinds of questions present themselves—questions upon the speedy and satisfactory answers to which the social and business future of the South must largely depend.

On the still scantily settled plains of the great Northwest, where as yet no necessity for economizing has arisen, or no law of diminishing returns begun to operate, the experiments to be tried and the problems to be undertaken are on a vaster and a bolder scale. There are arising and there are being answered those questions connected with the cultivation and the utilization of the soil which are destined to revolutionize agriculture and whose successful solution already excites the wonder and the admiration of the world.

Perhaps no better idea of the truly great diversity of the natural resources of the United States can be gained than from an examination of the ranges of topics treated in the bulletins of the experiment stations, a list of which is given at the end of this report, representing the work undertaken in compliance with that clause of the Hatch act of 1887 which provides for "such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

Among these many agricultural researches of purely sectional interest may be mentioned the experiments in forestry and timber culture conducted by the stations in the north Atlantic and the lake States; the investigations now being extensively carried on in the cultivation of the sugar beet and the manufacture of beet sugar in the central and western States; the improvements attempted in the cotton, rice, tobacco, and sugar-cane fields of the South; the changes produced in recent years in the methods of stock-raising and of dairying; the study of costs and prices in truck-farming and fruit culture; the irrigation and cultivation of the arid regions of New Mexico and Arizona; and the successful practice of viticulture and wine-making on the Pacific slope; in all of which fields the experiment stations have been the pioneers.

The plan of organization adopted by all the stations supported by the General Government aims at the performance of three distinct functions: *first*, the investigation of all such important questions relating to the agricultural interests of the States as are most pressing and vital to the farming communities, including the collection of such data of animal and vegetable life, the geological history, the soils and climate of the several sections of the States, as may be obtained for purposes of comparison and further research; *second*, original experimentation upon agricultural, horticultural, or other scientific lines which have not already been fully explored; *third*, the placing themselves in such relations to the farmers that they can most readily serve them as central points of information upon all matters connected with farm work and management. Thus many of the stations accomplish much of their most valuable work through their correspondence with the farmers, answering, as far as possible, any and all such questions as come to them, and offering such suggestions to individuals in regard to the care and direction of their farms as occasion and opportunity afford.

In many States, particularly in the West, where the great area included within State lines renders it impossible for a single station to perform the work for all sections, branch stations are established, reporting to a central station, generally the one connected with the agricultural college. From these branch stations abundant material is furnished for purposes of comparison between soils, products, and climatic conditions.

How to secure the most satisfactory distribution of the results of the station work has from the first been a question of no little difficulty. The first method universally adopted is the compliance with the requirements of the law providing for the issuing of at least one bulletin quarterly, and the making of an annual report upon the work to the governor and the Departments of Agriculture and of the Treasury. These bulletins and reports, and such special bulletins as the station staff may from time to time desire to issue, are printed at the expense of the States and sent free of charge to the farmers of the State, to every other experiment station, and, in general, to all who apply for them. There is thus constantly circulating through the country an ever increasing body of agricultural literature, the beneficial effects of which are yearly becoming more apparent.

Besides this method of dissemination of agricultural literature, there are several other ways in which the stations are enabled to keep in touch with the farming communities. The practice of holding county and State fairs affords an admirable opportunity for this, and one of which the stations have not been slow in taking advantage. Their exhibits at such gatherings usually attract no little attention. These exhibits usually consist of carefully arranged object lessons in analyses of farm and dairy products, fertilizers and soils, the results of variety tests of cereals and vegetables, comparative illustrations of the effects

of the different methods of seeding, etc. These occasions, too, afford opportunity for the general distribution of agricultural literature.

Another point of communication with the agricultural communities is the farmer's institutes. In some cases the staff of the experiment station is only able to be present at these meetings, and to engage in the discussion of such topics as may happen to arise; in others the meetings are held directly under the auspices of the station, and consist of lectures and addresses upon its work and the needs of the farmers themselves. Much real good has been accomplished by this means, and interest has been aroused upon many important local questions, such as county roads, drainage, the care of orchards, crop rotation, methods of stock breeding and feeding, dairying, and markets and prices.

In those States where a department of veterinary science forms part of the station organization, the plan of holding periodical clinics, at which animals are treated free of charge, and practical instruction is offered in the remedies for the most common diseases of farm stock and the treatment of injuries resulting from the accidents to which stock are liable, has been adopted with considerable success. The advantages of such clinics are mutual, instituting a more enlightened and often a more humane policy on the part of the farmers towards their stock, and serving as valuable object lessons in veterinary science to students of the agricultural colleges.

Not the least important of the effects of the scientific investigations of the experiment stations and the spread of technical agricultural knowledge resulting therefrom has been the rapid increase in the amount of agricultural literature in the United States. Forty years ago there was practically nothing of any great value published in this country bearing upon scientific agriculture. The proceedings of the European agricultural societies and a few works by European authors formed the whole body of literature upon the subject. To-day the number of agricultural works yearly published in the United States is more than equal to the demand. American authors on crop-raising, on drainage and irrigation, on stock-breeding and dairy farming, on horticulture, arboriculture, and viticulture, on botany and entomology, are regarded as authorities everywhere. The number of agricultural periodicals has become simply enormous, and is yearly increasing; while the general interest taken in all subjects relating to agriculture and its kindred sciences is most encouraging.

Although these conditions have to no small extent been brought about directly or indirectly by the experiment-station system as at present existing, the first effect of their work was naturally to direct attention to the stations themselves. Thanks to the more general enlightenment upon and the wider interest taken in agricultural matters, their plans and methods are being subjected to constant and often to severe scrutiny and criticism; this is precisely the most desirable state

of affairs that could exist, not that there is any real reason for complaint as to the character and amount of the work accomplished by them, for on the contrary, in most instances, they are well able to stand the test, but the consciousness that they are regarded as the leaders in the line of agricultural advancement has naturally a stimulating effect upon their work and workers.

It was not to be expected that the experiment stations would at once spring into popular favor. With not a few enemies from the first, ready and eager to detect and point out to the public gaze every slip and possible error made through inexperience or hasty conclusion, it has generally been the case that all important work undertaken has been deliberately conducted and the results cautiously announced. Directors have been keenly alive to the fact that a tardy conclusion is far better than an erroneous or a doubtful one. Repeated verification is absolutely essential to the accuracy of most agricultural experiments. So many quantities have to be taken into the account, so much allowance has to be made for unforeseen extraneous influences and varying climatic conditions, that only after again and again testing the fact to be demonstrated can any definite assertion be made regarding it. This delay, inexplicable to the uninitiated, has always been a point of attack from those who, themselves incompetent to judge, are unwilling that others should suspend judgment.

While there is to a certain extent a sort of general supervision exercised by the General Government, through the Department of Agriculture, over the work of the experiment stations, and while, too, there is some coöperation among the stations in the lines of work adopted, it is nevertheless a fact that they can not reach their highest point of utility until something more of a system has been devised. As we have seen, the immense area of the country and the great differences in soils and climates and social conditions serve to make the work of each experiment station more or less independent, yet this independence can be carried too far, especially in the case of stations where the conditions are more nearly alike. There seems to be no reason why the same experiments should be performed in a dozen different States upon points which can not vary, no matter where they arise. This is particularly true in the entomological and veterinary departments. Apparently much time and expense could be saved if such work were definitely divided up among the various stations in such a way that, where no local interest is involved, the results of the experiments should become general property and available to farmers everywhere. In this respect the European system is vastly superior to our own.

And yet our own stations are still comparatively in their infancy, and it would be clearly unfair to expect perfect organization and coöperation for years to come. That it will come, however, and that the efficiency and usefulness of the agricultural experiment stations will continue to

increase, is a belief which the record of their first five years of recognized existence would seem to fully warrant.

For complete lists of the bulletins published by the experiment stations, attention is called to the publications of the office of experiment stations of the Agricultural Department at Washington. In the Official Experiment Station Record (monthly), printed by the authority of the Secretary of Agriculture, a full bibliography of the literature emanating from the stations is maintained, with a summary of each month's new bulletins. Copies of this record can be obtained by applying to the United States Department of Agriculture.

Expenditure and working force of experiment stations.

State.	Number of station staff.	Number also giving instruction in college of agriculture.	Expenditure of station for year 1891-'92.	State.	Number of station staff.	Number also giving instruction in college of agriculture.	Expenditure of station for year 1891-'92.
Alabama	12	5	\$25,584.17	Mississippi	5	.....	\$15,000.00
Arizona	10	.....	15,000.00	Nevada	5	5	15,000.00
Delaware	6	5	15,000.00	New Jersey	9	3	15,000.00
Florida	7	.....	15,000.00	New York	14	10	14,826.79
Indiana	8	6	16,994.02	North Dakota	10	9	15,500.00
Kentucky	6	2	15,000.00	Oklahoma	3	3	15,000.00
Louisiana	19	8	15,000.00	Tennessee	7	4	15,131.82
Maine	10	5	15,000.00	Texas	7	5	18,368.74
Maryland	7	3	.....	Utah	5	5	15,989.86
Massachusetts	7	5	15,103.89	Virginia	9	6	17,221.64
Michigan	18	9	16,349.08	West Virginia	5	.....	16,076.97
Minnesota	6	.....	24,530.00	Wyoming	6	3	15,175.94

ANNUAL ADDRESS BEFORE THE ASSOCIATION OF AMERICAN AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

By WM. LEROY BROWN,

President of the association, at the sixth annual convention, held in New Orleans, November 15, 1892.

Gentlemen of the association: In the annual address to be made on this occasion, in accordance with the custom and law of this association of agricultural colleges and experiment stations, I propose to occupy a portion of your time in discussing the educational features of the institutions here represented, and their adaption to the wants of the people.

Education that looks to culture alone, while attractive and elevating in its nature and refining in its influence, does not of itself qualify the recipient for the active duties of life. It simply builds the piers of the bridge to be crossed. There must be superadded to this culture, when obtained by the fortunate possessor, that technical education which will span the chasm that separates college life from actual life.

Milton's definition of education as "that which fits a man to perform skilfully, magnanimously, and justly all the offices, both public and private, of peace and war," is of too general a character to be of value. For whatever might have been thought possible in Milton's day, it is beyond doubt impossible now for any one person to be so equally well educated in all departments as to be able to perform skilfully all the offices of peace and war.

In former years the older college systems were especially adapted, with their excess of classical culture, to the professions of law, medicine, theology, and pedagogy. But long since thoughtful men recognized the defect of a system of education that prepared the youth of the country only for the so-called learned professions.

The fact that of the many millions of our people that were engaged in gainful occupations about one-half was employed in agriculture, and less than 3 per cent belong to the class of lawyers, physicians, clergymen, and teachers, showed the necessity of

BROADENING OUR EDUCATIONAL SYSTEM

to include this larger class, for which but little special provision had been made. And besides this, the changes wrought in the various occupations of life by the advances made in science and its many applications to the industrial arts demanded that provision should be made for a wide diffusion among the people of a knowledge of these sciences and their applications.

It was in recognition of these facts that the Congress of the United States made the liberal donation of public lands to establish the American agricultural colleges.

It is gratifying to consider that wise provision of national legislation, through the instrumentality of which there now exists in every State and Territory a college, endowed by the General Government, for the education and elevation of the people by instruction in the principles and applications of science. Our admiration for the far-seeing wisdom of its authors, who, in that legislation, "built better than they knew," increases the more the subject is considered.

By the well-known act of Congress of July 2, 1862, by which the land-grant colleges were founded, Senator Morrill, of Vermont,

BUILT FOR HIMSELF A MONUMENT

more lasting than brass. For thereby his name will be held throughout our entire country in affection and esteem by the youth of the centuries to come, who shall fill the halls of these colleges in seeking that education which will fit them to become citizens worthy of the Republic.

It would, therefore, I beg just here to say, be eminently proper that there should be placed in the library of each of the land-grant colleges a bust of our distinguished legislative patron, as an evidence of our high appreciation of the great work he has accomplished in the cause of education.

The historic period in which the act of Congress became a law suggests a somewhat parallel instance in the establishment of a celebrated European university.

The historian tells us that hardly had the sound of the Spanish artillery ceased to be heard across the plains of Holland, when Leyden decked herself with flowers in honor of the founding of the great university which has for centuries cast the light of science and learning to the remote parts of the earth. While Leyden was founded as a memorial of peace, our colleges were founded in the hope of peace and the preservation of the Union.

Just thirty years ago, when all the energies of our country were being consumed in that terrible internecine struggle, when war, with its consuming blight, was alone the subject of thought and object of action, then, with

A WISE FORESIGHT

rarely equaled, with a sublime faith in the future of our country, did Congress set apart and devote a vast portion of the public domain to the several States, in trust, for the collegiate education of the generations to come. This act alone will signalize in history the Congress of 1862. A century must elapse before its beneficial effects on the education of the people will be duly appreciated.

As it was only possible once in the history of the world for America to have been discovered, so it was only possible once for the consecration of this large area of

public domain to the cause of education. And as the historian of the future traces the development in civilization of our Republic, and investigates the causes which have contributed thereto, the legislation which established these national colleges of science and the arts will be classed as a prominent factor. This affirmation is based not so much on what has been done in the field of education by these institutions, as on the promise of the future, on the broad view and purpose expressed in the charter as given in the act of foundation, and on the fitness of the charter of education, designated as the leading object of the colleges, to the wants of the people and the demands of the age of science in which we live.

At first many of the States, generally from economic considerations, associated these colleges with their State universities; others founded independent institutions. But in recent years the tendency has been to dissociate and establish

SEPARATE COLLEGES,

from a belief that thereby the object of the educational grant could be better accomplished. But whether they existed as co-ordinate parts of State universities or as independent institutions, one familiar with their history can not fail to have observed that in the early days there existed a widespread prejudice against the character of education proposed to be given. They were in many places regarded as inferior colleges for an inferior class. And possibly, in some instances, the mistake made in the organization and schedule of study may have furnished apparent cause for the existence of such prejudice.

The function of the college was, without doubt, often misunderstood, and the misapprehension in the popular mind was largely due to the name the colleges bear. By many they were thought to be colleges established for the sole purpose of making farmers of their graduates; that they were professional schools established for the purpose of educating boys to be farmers, similar in that respect to the professional schools for educating young men to be lawyers and doctors; and often the colleges experienced severe criticism if their graduates should prefer to adopt some other vocation than that of farming. In the opinion of these critics, a land-grant college failed of its object just in proportion as its graduates failed to adopt farming as a profession, and its success was considered proportionate to the number of farmers among the alumni.

This contracted view of the object of the land-grant colleges has now largely yielded to

A MORE GENEROUS APPRECIATION

of the object of the grant, to a better understanding of the broad and comprehensive plan of the charter as contained in the act of Congress, as well as a more correct appreciation of the relation of technical to liberal education, and to the acknowledgment of the high privileges and rights of an American boy to select his own vocation.

The object of our colleges is, as expressed in the original act, to teach—to teach “such branches of learning as are related to agriculture and the mechanic arts; and while it also includes military science, it does not exclude classical studies. This is broad, comprehensive, wise, not narrow or contracted. The leading object is to teach the principles and the applications of science, to teach subjects that relate to the useful arts, and while culture by the study of classics is not excluded, it is not the leading object. It were needless before this association to name the different branches that relate to agriculture, or the many departments of exact science that relate to the mechanic arts. All these constitute the direct object of the instruction to be given.

IN THE FIRST YEARS

of the history of these institutions attention was paid generally to agriculture and its branches, to the exclusion of the mechanic arts. This resulted not only

from economical considerations and from the larger interests involved in agriculture, but also from the inability at that time to teach the elementary forms of mechanic arts as successfully as is now done in the modern method of manual training.

From an experience of eight years in an institution where a well equipped laboratory of mechanic arts constitutes a part of its educational equipment, I can not express with too strong emphasis my appreciation of the beneficial effects of the modern method of teaching what is known as manual training. All present are familiar with its methods and the educational controversy in regard to its merits as a means of education. Some enthusiastic advocates have probably pressed its claims with too much ardor, and demanded that it should occupy too exalted a position among the methods and subjects that are generally recognized as means of education. Be that as it may, its true value is now recognized by educators. It has come to stay, and deserves recognition in the lower classes of a collegiate course, but only as a means of discipline.

Its object is not to make mechanics, nor the making of things, but the making of men. Its methods develop order, accuracy, perseverance, and self-reliance, and while imparting manual skill and giving strength to the body, its exercises tend in a very marked degree to develop the constructive and executive faculties.

Drawing, which gives the ability to express the concept graphically, is also an essential element of a scientific education, universally recognized of value. Hence, a school of drawing, as an adjunct of the school of mechanic arts, is a necessary department of a land-grant college. And the

MANUAL TRAINING

received from the series of graduated exercises given in this school, when combined with the study of science as practically taught in the different laboratories, gives an education eminently fitted for the American boy of the nineteenth century.

And, moreover, the wisdom of the charter of these colleges in requiring that provision should be made for education in those branches that relate to mechanic arts is made manifest when we consider their relation to the necessities of civilization.

The studies that relate thereto are the studies that relate to active life. The arts by which raw material is converted into food, clothing, and shelter for civilized man, by which towns and cities are built, by which rivers are spanned and roads constructed, and by which manufacturing is rendered possible, these, and all that mark the progress of the present century, are directly or remotely dependent on the applications of mechanic arts.

The relation that technical education has to modern civilization and the benefits to be derived therefrom are apparent to all observant minds. Daily observations show the advantage of skilled and intelligent labor over that which is ignorant and unskilled, and make evident the important part that educated industry has in modern civilization. These facts clearly demonstrate that for a State to equip her youth by proper education for this industrial age, to plan wisely for the future, she must encourage and liberally support technical education.

In view, therefore, of the prominent position mechanic arts now occupy in many of the land-grant colleges, and of necessity must occupy, it would seem eminently proper that this association should

PROVIDE A DEPARTMENT

or section devoted to the consideration of subjects related thereto, where our colleagues in these departments may discuss methods and improvements for the benefit of all concerned.

The relation that technical bears to liberal education is more generally appreciated now than formerly. In the early history of some of the colleges we represent it is probable that too much attention was paid to the mere muscular education, not recognizing the fact that if energy is consumed too largely by muscular exertion there will be

little store for mental effort. There is no true education in drudgery, in mere muscular labor, when the brain is not exercised. Colleges were not founded to teach manual skill, but to teach brain skill; to develop mind and character. And merely learning how to do without learning the why, is empirical, a rule-of-thumb method, which no educator can approve.

In education, principle is far beyond practice, and a knowledge of principle is essential to good practice.

Hence, technical education, to be of value, must be founded on a knowledge of principles, on a liberal education. And the broader and more extended the base of liberal education which constitutes the foundation, the more symmetrical will be the column of technical education which forms the superstructure.

And by the term liberal education, as here used, we do not necessarily include nor exclude the classics.

A FAIR KNOWLEDGE OF LATIN

for obvious reasons is of great advantage to a boy, and its prosecution is always advised if time and circumstances permit. But a comprehensive knowledge of the principles of science is essential to a liberal education, and especially to that liberal education which is to constitute the foundation for a successful technical superstructure.

Education in the principles of science must be insisted on if we hope to attain success in instruction in technics. While this is true in every department, it is preëminently true if agriculture be the vocation for which the student is to be qualified.

But the test of exact knowledge of the principles of science is the ability to put them in practice; hence the necessity of laboratories, of workshops in every department of science in connection with our colleges. We have, and if not we must have, in each land-grant college laboratories of chemistry, physics, mechanic arts, botany, biology, etc., where students may learn things, not words; where they may learn to execute; may educate their brains through their hands; may learn science through their finger tips.

But scientific laboratory work has its most comprehensive field in agriculture and horticulture and in the dairy; for here successful experimentation exacts tribute from almost every other department of science.

Successful instruction in agriculture demands both theory and practice, a knowledge of the principles of sciences with which agriculture is directly concerned, and a knowledge of the methods of applying those principles to successful practice.

LABORATORY PRACTICE

in the field and garden and dairy is essential, but it should always be educative in character, should exercise the brain as well as the hand. While *why* we plow is best learned at college, *how* to plow is best learned on a farm.

But the function of the land-grant colleges is not solely to make farmers of their students, and where such an opinion prevails the public mind can not, for the interests of education, be too soon disabused of the impression. To attempt such a rôle must of necessity result in failure. Nine-tenths of the boys who attend colleges in the South, if not in other sections, find, when they graduate, that their capital on which to begin life is their education alone.

On their brains and hands they must depend for success. They can not engage in farming without a farm, and this, as a rule, they do not possess. Hence they must begin as wage-earners, as teachers, engineers, chemists, or in whatever capacity their education and environment render possible.

But should favorable circumstances render it possible for the young graduate to begin life as a farmer, it does not necessarily follow that he will make a successful

farmer. When the conditions of land and market are favorable, success in farming comes of practical experience, close observation, executive ability, with untiring energy and good common sense; qualities that no college that exists, or may exist, can impart. But yet a good science education, such as is given in our land-grant colleges, is the best possible

PREPARATORY TRAINING FOR SUCCESS

in this honorable vocation.

We maintain, therefore, that the function of the land-grant colleges is not to make farmers of its students—and in saying this we are simply repeating the well-known opinion of the legislative founder of these institutions—but to make men; men with educated brains and skilled hands, ready and willing to work with both brains and hands in whatever vocation they are best fitted to perform the duties of life.¹

There is another view, worthy of consideration, which necessitates a broad and liberal curriculum, as required in the act of Congress.

The freedom and possibilities of American life differ from the fixed relations of an older European civilization, where the son is expected to adopt the vocation of the father. American freedom protests against a system that would educate a class of boys for one vocation only. The right of an American boy to carve out his own fortune, and to adopt any vocation that his inclination may lead to and his judgment approve, should not be abridged by an educational system designed to prejudge his future and train him for one vocation only. He does not measure his possibilities by his father's attainments. He may be farmer or physician, teacher or lawyer, merchant or mechanic, preacher or President. Hence our agricultural colleges should not be modeled after the plan of the European. They of necessity must be broader and more liberal in their educational schemes in order to

¹ It is perhaps needless to say that these colleges were not established or endowed for the sole purpose of teaching agriculture. Their object was to give an opportunity for those engaged in industrial pursuits to obtain some knowledge of the practical sciences related to agriculture and the mechanic arts; such as they could not then obtain at most of our institutions called classical colleges, where the languages, Greek and Latin, French and German, absorb perhaps two-thirds of all the time of the students while in college.

But it never was intended to force the boys of farmers going into these institutions so to study that they should all come out farmers. It was merely intended to give them an opportunity to do so, and to do so with advantage if they saw fit.

Obviously not manual but intellectual instruction was the paramount object. It was not provided that agricultural labor in the field should be practically taught, any more than that the mechanical trade of a carpenter or blacksmith should be taught. Secondly, it was a liberal education that was proposed. Classical studies were not to be excluded, and, therefore, must be included. The act of 1862 proposed a system of broad education by colleges, not limited to a superficial and dwarfed training such as might be had at an industrial school, nor a mere manual training such as might be supplied by a foreman of a workshop or by a foreman of an experimental farm. If any would have only a school with equal scraps of labor and of instruction, or something other than a college, they would not obey the national law. Experience in manual labor, in the handling of tools and implements, is not to be disparaged; in the proper time and place it is most essential, and generally something of this may be obtained either before or after the college term, but should not largely interfere with the precious time required for a definite amount of scientific and literary culture, which all earnest students are apt to find far too limited.—*Senator J. S. Morrill.*

ADAPT THEMSELVES TO AMERICAN CIVILIZATION.

While these views are not new to the members of this association, they still must be, in many sections, emphasized with insistence, in order to give a just impression of the educational work we are endeavoring to do and are required to do under the law establishing these institutions.

They constitute, on the one hand, the argument for breadth, for liberal education against narrowness, which is sometimes charged by adherents of the old classical culture, who contend that there is no place for an agricultural college in the American system of education; and on the other hand they furnish the argument for liberal education against the empirical technical instruction that, even yet in many sections, agricultural friends contend should be limitations of the educational sphere of the land-grant colleges.

The growth of these institutions, their influence in causing older colleges to modify their courses of instruction, the high esteem in which they are held by men of learning and light as educational centers of power, the life and energy they manifest in every State, furnish the answer to each class of critics, and give assurance of an influence for good that will widen with the years.

Our association represents not agricultural colleges, but

AMERICAN AGRICULTURAL COLLEGES;

broad institutions adapted to American civilization, and not imitations of those which exist elsewhere, and are adapted to an older civilization where class education is recognized. They are the product of our civilization and of the century in which we live, and represent, not the old, but the new education.

And this so-called new education makes no protest against the old classical system which has for centuries held the gateways of the temple of learning, and trained and disciplined and refined human thought and expression. It is not revolutionary, but supplementary, and seeks to build up and develop American civilization by making the leading object not linguistic culture, but scientific training.

Our colleges represent the legitimate outgrowth of the progress of science and the demands of the century. They must grow in harmonious development with the age in which they exist, and must not cease to grow, for with a college the cessation of growth is the beginning of decay. Their faces are turned toward the future and not toward the past; hence their chief concern must be about the studies of the present and future.

In the former centuries it was not useful knowledge, but polite learning; not the laws of nature, but the laws of language, that were deemed worthy of study.

No one knew a century ago that steam would revolutionize the world and change the methods of human industry. No one knew that it would enable England, with its limited area and population, to do the work that represents the equivalent of the manual labor of all the able-bodied men of the world. But the fact is it has

CHANGED THE FACE OF THE CIVILIZED WORLD,

entered every department of human industry, and largely modified our educational systems. It is no longer a question whether science shall be taught or not. The spirit of the age demands it, and the question now is, in the limited time that can be devoted to education, how much of the old can be retained.

We have reason to be thankful that the colleges represented by this association have their faces turned toward the future, and that there is established in every State of the Union a college that exalts useful knowledge and educates its youth for the future and not for the past.

But some contend, though at present the tendency is to a more liberal view, that education in science is inferior in character and in discipline to the old form of education of the classical colleges. Were this the proper place for controversy, we

might assume the aggressive and challenge comparison of results of the centuries of educational work under the classical curriculum, with the achievements of the scientific schools of recent times. If fruits are the test of merit, the decision would not be doubtful.

In defense of the discipline that is the result of the study of science, we may briefly say that the study gives thought and tone to the mind, cultivates accuracy of perception, discrimination of judgment, closeness of observation, correctness of reasoning, and imparts a love of truth rather than of victory; and further by its study of the concrete rather than the abstract, by its constant looking for the relation of cause and effect, the mind is familiarized with the true spirit of inductive philosophy, the philosophy of daily life, and thus in its educational effect is demonstrated the truth of the definition that science at last is only "refined common sense."

Our contention is for all that gives an educated man power in practical life, that gives self-reliance and trains executive ability, that gives true manhood, that looks to life in its wider aspects and not to self for culture's sake, that that education given by the scientific and technical schools holds no inferior, but for many vocations a superior rank.

Culture is a luxury in education, but science is a necessity; a necessity for all the people.

There is one feature of our colleges that in this brief review should not be omitted. The charter makes imperative instruction in military tactics, and to emphasize the obligation the General Government has made provision to furnish to each institution a qualified officer to give the requisite instruction. And thereby we have the excellent instruction of the United States Military Academy extended to the thousands of young men of the several States who attend the colleges here represented.

THE MILITARY INSTRUCTION

and training received makes the young men citizens of more value to the State and the nation. They constitute material for the trained military reserve, ready to support the arm of the civil authority should occasion require, and hence are an element of power in our midst, which, increasing with the years, tends to conserve our civilization.

That military instruction is required is a mark of the wise legislation that formulated the charter, and fidelity to the trust requires that its provision should be faithfully executed. The Commissioner's report for 1889 shows that 54 per cent of the 10,000 students in the land-grant colleges received instruction in military tactics; a gratifying result, manifesting that the trust is faithfully executed.

EXPERIMENT STATIONS.

But this association represents not only agricultural colleges, but also experiment stations connected therewith.

Experience confirmed what reflection anticipated, that agriculture, neither as an art nor as a science, could be largely promoted by teaching college students the elements of the sciences related thereto.

The agricultural colleges at first largely failed to win the confidence of the farmers, those whose interests they were especially designed to promote.

The unsolved problems of agriculture demand for their solution the profound study of the best scientific experts, and are to be solved only by accurate scientific investigation and experimentation.

The necessity for means and men to conduct this scientific research and investigation of the varied subjects related to agriculture was first recognized by college workers, and public opinion, largely created by their influence, was formulated by Congress in the act of 1887 establishing the agricultural experiment stations.

By this act there was made by the General Government this munificent endowment for research; and thereby has been established in every State a corps of sci-

entific experts, whose duty is not to teach but to investigate; to investigate scientifically subjects that relate to agriculture.

No government ever paid a higher tribute to the value of science or made a more valuable contribution to the interests of agriculture.

Provision was made both for discovery and dissemination. This important supplement to the agricultural colleges has given to the farmers of every State a corps of scientific officers to work exclusively for their interest, and has wisely provided that the results of the investigations shall be brought home to them in the form of printed bulletins. The investigations have already become fruit in the discovery of important truths and in

THE DISSEMINATION OF KNOWLEDGE OF VALUE TO THE FARMERS,

and in the coming years benefits of inestimable value must accrue to agriculture.

The officers of the station have a great work before them. One worthy of the best labors of the best men. They have, to call forth their best energies, not only the stimulus of devotion to science in the search for discovery, but also the satisfaction of knowing that what may be discovered of value to agriculture will cause its authors to be esteemed in years to come as benefactors of the human race.

But the growth of these colleges during the quarter of a century of their existence and the progress of science demanded that they should be provided with enlarged and improved scientific equipment, with a large staff of officers, with better libraries, and improved facilities of instruction.

And the Congress of 1890, with marked unanimity, happily under the leadership of the distinguished author of the original bill founding these institutions, passed the act granting an additional endowment, increasing, for specific purposes, the income of each college.

By this last and third Congressional act the colleges have a pledge of confidence on the part of the General Government, of which every incentive that ennobles human nature demands that they should prove themselves worthy.

There should be no step backward. We must as earnest Christian teachers, as true students of science, work continuously and earnestly, and execute faithfully the great trust committed for the present to our keeping. It is a great trust

FOR THE BENEFIT OF THE PEOPLE,

all the people, and not for any special class.

The admirable form of government under which we live is illustrated in the relation of these national schools of science to the States and General Government. The colleges, though endowed by the General Government, are subject only to State control, under the conditions imposed on the trust. These conditions inhibit the use, for building purposes, of the income from two of the grants and permit a small expenditure from the third.

Hence, in accepting the trust, each State imposed on itself the obligation to provide for its college all buildings that are necessary to a full realization of the objects of the national grant.

And the reports show that this obligation has been complied with in a liberal manner by large donations from the State legislatures and from other sources, the value of the gifts to these institutions in land, buildings, and equipment being in excess of \$5,000,000. By this provision the interest of the State in the college is increased and the endowment is preserved undiminished.

It is held by the States in trust, in perpetuity, and can not be squandered or lost by mismanagement. Hence, our colleges are permanent institutions, resting on a foundation

AS SECURE AS THE GOVERNMENT ITSELF.

From the last published report of the Commissioner of Education for the year 1889 we find that the thirty-two land-grant colleges named therein had 700 officers

of instruction, with nearly 10,000 students; that they enjoyed an annual income of \$1,500,000, with an endowment of \$10,000,000; that the value of their grounds and buildings was estimated at \$6,000,000, with a scientific equipment valued at nearly \$1,000,000.

And further, as significant of their growth, of fourteen colleges there reported, in the five years from 1884 to 1889, the number of instructors had increased 30 per cent and the number of students 50 per cent.

It is true that several of the institutions given in this report are State universities, but were we able to present the reports of the fifty-three land-grant colleges established in 1892, limiting the statistics strictly to these colleges and the corresponding departments in the universities, the figures given would not be diminished, but largely increased.

And besides the colleges, this association also represents fifty-one experiment stations, with a staff of over 500 officers and assistants, scattered throughout the States and Territories, working for the promotion of the great interest of agriculture.

The number of students and officers of instruction and investigation, the value of the buildings and equipment, the amount of the endowment and annual income, demonstrate the importance of the trust committed to the officers and trustees of the institutions. They have long passed the experimental stage, and are

RECOGNIZED AS IMPORTANT FACTORS

in advancing education and promoting civilization in America.

Our duty is to make the work of these colleges and stations known to the world. And the opportunity presented in the World's Columbian Exposition at Chicago should be improved by presenting in the most efficient manner the methods used and the work done.

Faithfulness to our trust, as well as the interest of the institutions we represent, demand this.

But to make the exhibit worthy of the institutions will require a large additional expenditure of energy and money. And that our governing boards are authorized to direct this expenditure appears evident from the educative nature of a representative exhibit and the wide diffusion of useful knowledge that would result therefrom.

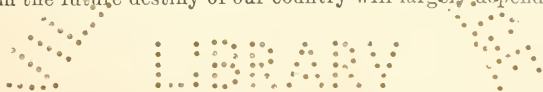
Especially does it follow that an appropriation of funds for this purpose is legitimate, since the diffusion of useful knowledge is named in the act of Congress as one of the objects of the grant. With means available and proper energy, there can be made, and should be made, such an exhibit at Chicago as will challenge the admiration of visitors, American and foreign; such as will show the beginnings of the great work to be accomplished by the national schools of science and the agricultural experiment stations for the education and upbuilding of our whole country.

In presenting to you these views I beg you to consider the relation you hold to the present and future well-being of our country. You are

SCIENTIFIC INVESTIGATORS,

working for the improvement and promotion of that industrial art which directly concerns the well-being of the largest portion of the human family. You are observing, noting, comparing the methods of nature's actions in order to discover what promotes or retards plant or animal life. And whether working with retort, microscope, pruning or dissecting knife, you are working to ameliorate the conditions of human life, and by showing how better to subdue the earth, to bring increased prosperity and happiness to the homes of the people, you are working not for self but for the good of humanity.

We are teachers, having under our charge thousands of the youth of to-day, those upon whom the future destiny of our country will largely depend.



Let us duly appreciate the magnitude and importance of the great trust committed to our care, its weighty responsibilities as well as its immense possibilities. Let us faithfully and zealously execute its provisions, educating the youth intrusted to us so well and so thoroughly in the principles and applications of science that they will show in their lives that love of work, that love of truth that comes from an imbibition, by scientific study, of scientific method and scientific spirit. Let us, looking to the future with an earnest love for our whole country, faithfully work to make the national schools of science here represented the best schools—best in their adaptation to the demands of American civilization, best in their harmony with the spirit of the age, and best in the wide diffusion of a patriotic and Christian spirit among the youth of our country.



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